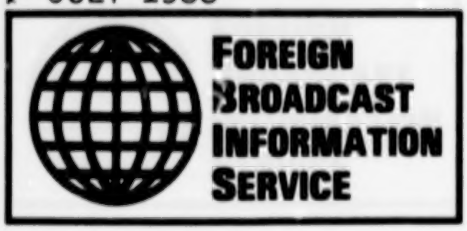
JPRS-UCC-88-001
7 JULY 1988



JPRS Report

Science & Technology

USSR: Computers

TABLE OF CONTENTS

JPRS-UCC-87-001, 15 JANUARY 1987 -

JPRS-UCC-87-019, 29 SEPTEMBER 1987

JPRS-UCC-87-001

15 JANUARY 1987

USSR REPORT

CYBERNETICS, COMPUTERS AND AUTOMATION TECHNOLOGY

CONTENTS

GENERAL

Computer Infrastructure Standardization Urged
(B. Melik-Shakhnazarov; KOMMUNIST, 19 Aug 86)..... 1

Dangers in Overestimating Computer Capabilities Pointed Out
(Germogen Sergeyevich Pospelov, Interview; NTR:
PROBLEMY I RESHENIYA, No 10, 20 May-2 Jun 86)..... 4

USSR Computer Committee Chairman Explains Work
(Nikolay Vasilyevich Gorshkov, Interview;
EKONOMICHESKAYA GAZETA, No 18, Apr 85)..... 8

HARDWARE

Achievements of Biological Physics Utilized in Engineering
(G. Ivanitskiy, Interview; NTR: PROBLEMY I
RESHENIYA, No 10, 20 May-2 Jun 86)..... 11

APPLICATIONS

Computer Controls for Gas Pipeline
(Zh. Tekhoyan; KOMMUNIST, 3 Jun 86)..... 15

Automated System in Petroleum, Gas Industry Described
(NTR: PROBLEMY I RESHENIYA, No 10, 20 May-2 Jun 86).... 16

Some Questions in Metrological Support to ASU TP
(K.I. Didenko, M.D. Gafanovich; IZMERITELNAYA
TEKHNIKA, No 7, Jul 85)..... 17

Computer Complex for Aluminum Alloy Quality Control
(O.M. Byalik, A.A. Smulskiy, et al.; TECHNOLOGIYA I ORGANIZATSIYA PROIZVODSTVA, No 2, Feb 86)..... 24

Scientific Research Automation Described
(V.Ya. Maysnikov; EKONOMICHESKAYA GAZETA, No 18, Apr 86)..... 27

Automating Data Processing on the Rayon and Oblast Levels
(A.P. Kolesnik, K.V. Golovin, et al.; FINANSY SSSR, No 5, May 86)..... 29

Development of Integrated System for Processing Information of Finance-Credit Agencies in Rayon
(M.A. Syrg, V.A. Tann; FINANSY SSSR, No 5, May 86)..... 35

Difficulties in Computer Introduction at Tire Plant
(A. Maslov; PRAVDA UKRAINY, 16 Apr 86)..... 39

Computerized Crop Information in Moscow Oblast
(Ye. Grigoryev; LENINSKØYE ZNAMYA, 16 Aug 86)..... 43

Flexible System for Gathering, Storing and Processing Organizational-Economic Information Based on YeS EVM Computer
(V.Ya. Korshak, O.N. Ivanov; ENERGETIK, No 6, Jun 86)... 45

Method of Determining Economic Effect From Automation of Production Control
(R.I. Zabotina; TEKHNOLOGIYA I ORGANIZATSIYA PROIZVODSTVA, No 3, Mar 86)..... 49

Automated System for Checking Execution of Documents
(V.G. Shipitsyn, I.P. Lagno, et al.; TEKHNOLOGIYA I ORGANIZATSIYA PROIZVODSTVA, No 2, Feb 86)..... 52

Computerization of Building Design
(R. Dichyus; STROITELNAYA GAZETA, 10 Sep 86)..... 54

Software Tools for Machine-Tool Attachment Design
(E.B. Bokshits, V.V. Bukataya, et al.; MEKHANIZATSIYA I AVTOMATIZATSIYA PROIZVODSTVA, No 7, Jul 86)..... 56

Developing Reclamation Projects in a Heuristic Mode
(Yanis Krakop; NAUKA I TEKHNIKA, No 3, Mar 86)..... 61

YeSKD Classifier- A Basis for Organizing Searches for Design Documents
(B. Kiryushchenko, A. Onishchenko; EKONOMIKA SOVETSKOY UKRAINY, No 1, Jan 85)..... 64

Research on Virus Identification, Gas Cleaning Discussed
(NTR: PROBLEMY I RESHENIYA, No 10, 20 May-2 Jun 86).... 68

New Eye Clinic for Chuvash ASSR
(Yu. Knyazev; PRAVDA, 8 Sep 86)..... 69

EDUCATION

Conflict in School Computerization Described
(I. Vedeneyeva; SOVETSKAYA ROSSIYA, 30 May 86)..... 70

Officials Hinder Goods Exchange Circle Computer Games
(L. Shurukht; SOVETSKAYA ESTONIYA, 10 Jun 86)..... 75

Mobile Computer Class in Tomsk Oblast Described
(L. Levitskiy; IZVESTIYA, 3 Sep 86)..... 79

Teachers' Role in School Computer Use
(A. Matyushkin; SOTSIALISTICHESKIY TRUD, 16 Apr 86)..... 83

A Training Computer
(I. Lenskiy, E. Livshits; NAUKA I TEKHNIKA, No 3,
Mar 86)..... 86

EXHIBITIONS

Exhibition of Computers and Automated Control Systems
(Ye.T. Larina, O.N. Lutovinina; MEKHANIZATSIYA I
AVTOMATIZATSIYA PROIZVODSTVA, No 7, Jul 86)..... 88

/9835

JPRS-UCC-87-002

2 MARCH 1987

USSR REPORT

CYBERNETICS, COMPUTERS AND AUTOMATION TECHNOLOGY

CONTENTS

HARDWARE

Personal Computers on the Starting Line
(B. Naumov; IZVESTIYA, 11 Jul 86)..... 1

Meeting of Estonian Academy of Sciences Described
(SOVETSKAYA ESTONIYA, 25 Jun 86)..... 5

Estimating Productivity of Multiprocessor Computer Systems With Conflicts in Shared Block Structure Memory
(V.F. Zeltinsh, L.P. Lobanov, et al.; AVTOMATIKA I VYCHISLITELNAYA TEKHNIKA, No 2, Feb 86)..... 7

Image Restoration in Iterative Optical-Electronic System With Feedback
(O.A. Afanasyev, S.M. Borzov, et al.; AVTOMETRIYA, No 2, Feb 86)..... 7

Study of Sensitivity of Thermographic Materials Based on Copper Hypophosphite in the Process of Thermal Laser Recording of Information
(S.G. Bayev, V.P. Bessmeltsev, et al.; AVTOMETRIYA, No 2, Feb 86)..... 8

Real Time Recording of Refraction Half Tone Transparencies on Polymer Films
(S.G. Bayev, V.P. Bessmeltsev; AVTOMETRIYA, No 2, Feb 86)..... 9

SOFTWARE

Features of Designing Software of Multifunctional System for Modelling Programmable Microprocessor Structures
(V.A. Kuzub, B.N. Rozenblyum; AVTOMATIKA I VYCHISLITELNAYA TEKHNIKA, No 2, Feb 86)..... 10

Design Principles for Machine-Independent Linkage Editors and Loaders in Microcomputer Cross Compilers
(A.A. Levitskiy, M.M. Muchnik; PROGRAMMIROVANIYE, No 2, Mar-Apr 86)..... 11

Organization of Dialogue Load Operation of the NORMIN Information System With the OB Multiterminal System
(A.I. Kirov, Yu.D. Romanova, et al.; PROGRAMMIROVANIYE, No 2, Mar-Apr 86)..... 11

Interaction of Assembler and PL/1 Programs With OS YeS Data Control System in Multitasking Mode
(S.A. Komarov; PROGRAMMIROVANIYE, No 2, Mar-Apr 86)..... 12

Automation of Generation of Paths for Testing of Programs Written in FORTRAN
(K.A. Iyudu, M.M. Aripov; PROGRAMMIROVANIYE, Mar-Apr 86)..... 13

Testing of Programs of Parallel Computer Systems With Common Control
(G.N. Kalyanov; PROGRAMMIROVANIYE, Mar-Apr 86)..... 13

Tools for Dialogue Program Development
(B. Volozh, M. Kakhro, et al.; PROGRAMMIROVANIYE, Mar-Apr 86)..... 14

APPLICATIONS

Analysis of Operation of VTs and Stations Using Statistical Simulation
(Ye. Yevstigneyev; VESTNIK STATISTIKI, No 8, Aug 86)..... 15

Second Stage of Standard ASOD of Administrative District
(E. Vanags; VESTNIK STATISTIKI, No 8, Aug 86)..... 19

"Iskra 2106" at Kukmorskaya RIVS
(N. Mukhametshin; VESTNIK STATISTIKI, No 8, Aug 86)..... 26

Application of "Iskra 2106" Microcomputer at District Level
(E. Semyonova; VESTNIK STATISTIKI, No 8, Aug 86)..... 27

Briefs
New Simulator for Robot/CNC Machine Tool Control 30

Introduction of Automated Data Processing System
(I. Pilipenko, V. Kadiyevskiy; VESTNIK STATISTIKI, No 6). 31

Automation of Statistical Accounting of Rayon Section
(Yu. Shabanov, V. Kuzikov, et al.; VESTNIK STATISTIKI, No 6, Jun 86)..... 36

Standard Design Solutions for Integrated Automation of Bookkeeping and Accounting Using YeS Computers
(N. Yegomostyev, G. Zhukovskiy; VESTNIK STATISTIKI, No 6, Jun 86)..... 38

Automation of Scientific Studies in the Area of EPR of Non-Ordered Solids, Spectral Recording, Processing and Analysis System
(A.N. Bals, L.M. Kuzmina; AVTOMETRIYA, No 2, Feb 86)..... 46

Computer Experimental Determination of Optimal Injection Conditions for Axisymmetrical Bodies
(A.M. Antonov, L.A. Prokopenko; DOKLADY AKADEMII NAUK UKRAINSKOY SSR. SERIYA A -- FIZIKO-MATEMATICHESKIYE I TEKHNICHESKIYE NAUKI, No 4, Apr 86)..... 46

Analysis of Nonsteady Gas Flow Processes in Pipes Using Stepped Images
(S.Ye. Saukh; DOKLADY AKADEMII NAUK UKRAINSKOY SSR. SERIYA A--FIZIKO-MATEMATICHESKIYE I TEKHNICHESKIYE NAUKI, No 4, Apr 86)..... 47

Holographic Measurement System for Determination of Phase Difference Field by Introducing Controlled Phase Shift
(V.I. Guzhov, A.G. Kozachok, et al.; AVTOMETRIYA, No 2, Feb 86)..... 48

THEORY OF COMPUTATION

Polynomially Stable Fast Parallel Algorithm for Tridiagonal Systems
(Yu.M. Nechepurenko; ZHURNAL VYCHISLITELNOY MATEMATIKI I MATEMATICHESKOY FIZIKI, No 7, Jul 86)..... 49

Unimodular Problem of Countable Programming
(O.A. Shcherbina; ZHURNAL VYCHISLITELNOY MATEMATIKI I MATEMATICHESKOY FIZIKI, No 7, Jul 86)..... 49

Algorithm of Solution of Nonlinear Boundary-Value Problem for Ordinary Differential Equations in Multivaluedness Region
(A.S. Belomyttsev, V.I. Karaban; ZHURNAL VYCHISLITELNOY MATEMATIKI I MATEMATICHESKOY FIZIKI, No 7, Jul 86)..... 50

Modelling of One Class of Nonlinear Self-Organizing Systems
(B.N. Pshenichniy, Yu.N. Onopchuk, et al.; DOKLADY AKADEMII NAUK UKRAINSKOY SSR. SERIYA A -- FIZIKO-MATEMATICHESKIYE I TEKHNICHESKIYE NAUKI, No 4, Apr 86)... 51

Control Under Conditions of Indifferent Uncertainty
(V.A. Labkovskiy; DOKLADY AKADEMII NAUK UKRAINSKOY SSR. SERIYA A --FIZIKO-MATEMATICHESKIYE I TEKHNICHESKIYE NAUKI, No 4, Apr 86)..... 51

Construction of an Analytic-Statistical Estimate for the Nonsteady Readiness Factor of Systems
(V.G. Krivutsa; DOKLADY AKADEMII NAUK UKRAINSKOY SSR. SERIYA A -- FIZIKO-MATEMATICHESKIYE I TEKHNICHESKIYE NAUKI, No 4, Apr 86)..... 52

NETWORKS

Optimization of the Structure of Ring Data Transmission Networks
(G.F. Yanbykh; AVTOMATIKA I VYCHISLITELNAYA TEKHNIKA, No 2, Feb 86)..... 53

Three Problems of Decentralized Functioning of Ring Architecture Microprocessor Systems
(I.Z. Nafikov, R.M. Nuriev; PROGRAMMIROVANIYE, No 2, Mar-Apr 86)..... 54

Analysis of the Mutual Influence of Local Computer Network Software and Hardware During Debugging
(B.P. Gorelik; AVTOMATIKA I VYCHISLITELNAYA TEKHNIKA, No 2, Feb 86)..... 54

Local Data Transmission Network of Distributed Control Systems
(Yu.I. Bain, R.A. Paluoya; AVTOMATIKA I VYCHISLITELNAYA TEKHNIKA, No 2, Feb 86)..... 55

EDUCATION

Automation of the EsSSR State Library Described
(A. Agarkov; SOVETSKAYA ESTONIYA, 12 Jun 86)..... 56

/9835

JPRS-UCC-87-003

27 MARCH 1987

USSR Report

CYBERNETICS, COMPUTERS AND AUTOMATION TECHNOLOGY

TABLES OF CONTENTS

JPRS-UCC-86-001, 7 JANUARY 1986-

JPRS-UCC-86-014, 9 DECEMBER 1986

FBIS FOREIGN BROADCAST INFORMATION SERVICE

JPRS-UCC-87-004

31 MARCH 1987

USSR REPORT

CYBERNETICS, COMPUTERS AND AUTOMATION TECHNOLOGY

CONTENTS

GENERAL

Expert Disturbed by Pace of Computerization
(A. Nemov, G. Georgiyev; SOVETSKAYA ROSSIYA, 31 Jul 86) 1

HARDWARE

Lasers and Quality
(D. K. Millers; NAUKA I TEKHNIKA, No 7, Jul 86) 5

YeS-2700 Matrix Processor
(V. Musayelyan; KOMMUNIST, 14 Jun 86) 10

Setting Standards on Consumption of Magnetic Media
(V. Vasilyeva, M. Lermontov, et al.; VESTNIK STATISTIKI, No 7, Jul 86) 12

Popular Science Pamphlet on Computer Inspection and Diagnosis
(B. G. Sergeyev, B. M. Basok; NOVOYE V ZHIZNI, NAUKE, TEKHNIKE: SERIYA RADIOELEKTRONIKA I SVYAZ (KONTROL I DIAGNOSTIKA EVM), No 10, 1986) 18

Mathematical Model and Thermal-Arrangement Synthesis of Multichannel Systems
(Yu. G. Stoyan, V. P. Putyatin, et al.; ELEKTRONNOYE MODELIROVANIYE, No 3, May-Jun 86) 20

Solution of Placement Problem by Specialized Automated Electronic Design Subsystem
(V. M. Kureychik, B. K. Lebedev, et al.; ELEKTRONNOYE MODELIROVANIYE, No 3, May-Jun 86) 20

Analysis of Functioning of Computer Machines and Systems
(V. G. Khoroshebskiy; ELEKTRONNOYE MODELIROVANIYE, No 4, Jul-Aug 86) 21

Computer Systems Based on Bit-by-Bit Interpretation of Processed Information
(V. F. Yedokimov, A. I. Stasyuk; ELEKTRONNOYE MODELIROVANIYE, No 4, Jul-Aug 86) 21

Problems of Creating Magnetoelectric Actuating Elements with Maximum Speed
(V. V. Petrov; ELEKTRONNOYE MODELIROVANIYE, No 4, Jul-Aug 86) 22

SOFTWARE

Tunable System for Programming Microprocessor Modeling Complexes
(A. A. Mein, V. G. Speranskiy; ELEKTRONNOYE MODELIROVANIYE, No 3, May-Jun 86) 23

Dialogue Modeling System for Discrete Devices with Defects
(S. V. Yenin, A. I. Filatchenkov; ELEKTRONNOYE MODELIROVANIYE, No 3, May-Jun 86) 23

The Concept of Design of a Dialogue Modeling System and Its Implementation
(A. G. Dodonov, V. G. Klimenko, et al.; ELEKTRONNOYE MODELIROVANIYE, No 4, Jul-Aug 86) 24

APPLICATIONS

Computers at the Service of Insurance
(K. Zhuyrikov, G. Kim; NARODNOYE KHOZYAYSTVO KAZAKHSTANA, No 8, Aug 86) 25

Social Science Information Base
(ZARYA VOSTOKA, 30 Mar 86) 32

Estimation of Economic Efficiency of Automation
(N. Ivanov, L. Yampolskaya; VESTNIK STATISTIKI, No 7, Jul 86) 35

CAD Programs Developed
(V. Kaner; NTR: PROBLEMY I RESHENIYA, No 11, Jun 86) 41

Improving the Organizational and Planning Preparation of Industrial Processes on the Basis of YeSTPP [Unified System of Technological Preparation of Production]
(L. V. Rozenblyum, B. V. Trembovolskiy; TRAKTORY I SELKHOZMASHINY, No 3, Mar 86) 43

Problems of Assuring Controllability of Microprocessor Complexes for Control of Complex Technological Objects
(V. A. Guayayev; ELEKTRONNOYE MODELIROVANIYE, No 4, Jul-Aug 86) 52

Hierarchy of Problems and Mathematical Models for Optimization of Gas Transport System Development
(M. N. Kulik, G. V. Voytsekhovskaya, et al.; ELEKTRONNOYE MODELIROVANIYE, No 4, Jul-Aug 86) 52

THEORY OF COMPUTATIONS

Method of Machine Analysis of Sequential Computation Processes
(A. G. Dodonov, V. L. Patrikeyev; ELEKTRONNOYE MODELIROVANIYE, No 3, May-Jun 86) 53

Modeling of Variation Problems Using the Shortest Path Method
(V. V. Vasilev; ELEKTRONNOYE MODELIROVANIYE, No 4, Jul-Aug 86) 53

T-Transforms of Complex Systems of Differential Equations
(N. I. Ronto; ELEKTRONNOYE MODELIROVANIYE, No 4, Jul-Aug 86). 54

Study of Dynamic Systems with Slow Changes in Input Signal Parameters
(I. M. Romanishin, L. A. Sinitskiy; ELEKTRONNOYE MODELIROVANIYE, No 4, Jul-Aug 86) 54

EDUCATION

Teaching Computer Literacy
(V. Gritskevich; KOMMUNIST KIRGIZSTANA, No 6, Jun 86) 56

College-Level Teaching Computers Discussed
(Ye. Zarutskaya; SOVETSKAYA LATVIYA, 21 May 86) 60

Obstacles to Computerization
(V. Frolov; PRAVDA, 29 Aug 86) 61

Russian Vs English Notation
(U. Mannanov; PRAVDA VOSTOKA, 12 Aug 86) 64

JPRS-UCC-87-005

2 APRIL 1987

USSR REPORT

CYBERNETICS, COMPUTERS AND AUTOMATION TECHNOLOGY

CONTENTS

SOFTWARE

Use of Prototype Programs in Modification of ASU Software
(S.V. Yakovlev; MEKHANIZATSIYA I AVTOMATIZATSIYA PROIZVODSTVA, No 9, Sep 86)..... 1

Automated System of Integrated Data Processing for the 'ISKRA-226'
(N. Gorelik, A. Finogenov; NTR: PROBLEMY I RESHENIYA, No 16, 19 Aug-1 Sep 86)..... 6

APPLICATIONS

Microprocessor for Controlling Movement of Oxygen Tuyere
(A.N. Neretin, V.I. Sherstnev; MEKHANIZATSIYA I AVTOMATIZATSIYA PROIZVODSTVA, No 9, Sep 86)..... 8

Structural-Systems Analysis as a Basis for Increasing Effectiveness of Scientific and Technical Information Networks
(D.M. Mekhtiyev, T.A. Ibragimov, et al.; NARODNOYE KHOZYAYSTVO AZERBAYDZHANA, No 8, Aug 86)..... 13

Automatic Memories - Their Characteristics and Application in Automated Production Process Management Systems
(Yu.N. Potepalov, T.A. Neumoyna; MEKHANIZATSIYA I AVTOMATIZATSIYA PROIZVODSTVA, No 9, Sep 86)..... 14

Improvement of Quality of Systems for Processing Economic Information
(S. Stoyanova; MEKHANIZATSIYA I AVTOMATIZATSIYA PROIZVODSTVA, No 8, Aug 86)..... 20

Automation of Accounting for, Forecasting of Reserves of Physical Resources
(V.V. Stoshkus, V.M. Rutkauskas; MEKHANIZATSIYA I AVTOMATIZATSIYA PROIZVODSTVA, No 8, Aug 86)..... 24

Microcomputer Control System for 'Universal-15M' Robot
(A.A. Alekseyev, F.F. Kotchenko, et al.; MEKHANIZATSIYA I AVTOMATIZATSIYA PROIZVODSTVA, No 8, Aug 86)..... 27

Automated Milking Machine
(NTR: PROBLEMY I RESHENIYA, No 16, 19 Aug-1 Sep 86)..... 32

Improvement of Set of State Standards, Guideline Documents for Computer-Aided Design Systems
(Ye.S. Krankov, S.A. Terpeneva; STANDARTY I KACHESTVO, No 9, Sep 86)..... 33

Interactive Computer-Aided Design System
(I.F. Ushakov; MEKHANIZATSIYA I AVTOMATIZATSIYA PROIZVODSTVA, No 9, Sep 86)..... 39

Computer-Aided Design in Pipe Industry
(V. Druyan; PRAVDA UKRAINY, 26 Oct 86)..... 46

Introduction of Automated Design System for Mechanical Working Processes in Oil Field Equipment Production
(R.G. Libenson; NARODNOYE KHOZYAYSTVO AZERBAYDZHANA, No 8, Aug 86)..... 48

Review of Handbook on Production Planning Using Automated Management System
(V.I. Danilin; EKONOMIKA I MATEMATICHESKIYE METODY No 4, Jul-Aug 86)..... 49

NETWORKS

Budapest-Leningrad Communication Channel
(NTR: PROBLEMY I RESHENIYA, No 14, 22 Jul-4 Aug 86)..... 52

EDUCATION

Informatics and the National Information Resource
(I. Chebotaru; SELSKOYE KHOZYAYSTVO MOLDAVII, No 5, May 86)..... 53

Hardware for Automated Information Processing
(I. Chebotaru, K. Galben; SELSKOYE KHOZYAYSTVO MOLDAVII, No 6, Jun 86)..... 55

How To Solve a Problem on a Computer
(I. Chebotaru, N. Galushka; SELSKOYE KHOZYAYSTVO MOLDAVII, No 7, Jul 86)..... 57

Programming School
(G. Grigas, V. Dagene; NTR: PROBLEMY I RESHENIYA, No 16, 19 Aug-1 Sep 86)..... 59

'Pyramid' Microcomputer for Training
(S. Pavlova; NTR: PROBLEMY I RESHENIYA, No 16, 19 Aug-1 Sep 86)..... 60

Computer Use in Teaching Social Sciences Urged
(T.V. Belova; VESTNIK MOSKOVSKOGO UNIVERSITETA, SERIYA 12: TEORIYA NAUCHNOGO KOMMUNIZMA, No 4, 1986)..... 61

PUBLICATIONS

New Journal 'Informatics and Education' Published
(S. Khozin; NTR: PROBLEMY I RESHENIYA, No 19, 7-20 Oct 86)..... 70

PERSONALITIES

Sixtieth Birthday of Vladimir Mikhaylovich Kurochkin Celebrated
(ZHURNAL VYCHISLITELNOY MATEMATIKI I MATEMATICHESKOY FIZIKI, No 6, Jun 86)..... 71

CONFERENCES

Conference on Automatic Control
(KAZAKHSTANSKAYA PRAVDA, 20 Sep 86)..... 73

Conference on Interactive Multi-Terminal System
(KAZAKHSTANSKAYA PRAVDA, 20 Sep 86)..... 74

/13046

JPRS-UCC-87-006

27 APRIL 1987

USSR REPORT

CYBERNETICS, COMPUTERS AND AUTOMATION TECHNOLOGY

CONTENTS

HARDWARE

Optical Equipment For Operational Monitoring of Functional Units of Computer Equipment
(V. A. Legonkov; IZMERENIYA, KONTROL, AVTOMATIZATSIYA, No 4, Apr 86)..... 1

SOFTWARE

Trends and Prospects For Design of Adaptive Mechanisms For Active System Functioning
(V. N. Burkov, V. V. Tsyganov; IZMERENIYA KONTROL AVTOMATIZATSIYA, No 4, 1985)..... 2

Information System Architecture
(M. Sh. Tsalenko, D. S. Chyeryeshkin; NAUCHNO-TEKHNICHESKAYA INFORMATSIYA, SERIYA 2. INFORMATSIONYYE PROTSESSY I SISTEMY, No 8, Aug 86)..... 3

APPLICATIONS

Automated Control Systems: Models, Practical Management and A Workable Economy (Following Up a Roundtable Discussion)
(V. I. Danilov-Danilyan; EKONOMIKA I MATEMATICHESKIYE METODY, No 5, Sep-Oct 86)..... 4

Central Task Complex of the Automated Control System For Planning Calculations of the USSR Gosplan: Results and Future Prospects
(V. V. Shcherbinkin, Ya. M. Urinson; EKONOMIKA I MATEMATICHESKIYE METODY, No 5, Sep-Oct 86)..... 21

Territorial Planning and Management: Processes of Integration in the Automated Control System For Planning Calculations of the Ukrainian SSR Gosplan
(M. T. Matveyev, V. V. Kiyan; EKONOMIKA I MATEMATICHESKIYE METODY, No 5, Sep-Oct 86)..... 31

Information Science as A Branch of the National Economy: Characteristics, Development Pace and Trends
(N. N. Moiseyev, Yu. N. Pavlovskiy; EKONOMIKA I MATEMATICHESKIYE METODY, No 5, Sep-Oct 86)..... 40

Second Phase and Development Prospects of the Automated Control System of Planning Calculations of the Lithuanian SSR Gosplan
(A. A. Vasilyauskas; EKONOMIKA I MATEMATICHESKIYE METODY, No 5, Sep-Oct 86)..... 46

Concerning Several Organizational Aspects of the Development of the Planning Technology in a Union Republic
(E. Ya. Sture; EKONOMIKA I MATEMATICHESK'YE METODY, No 5, Sep-Oct 86)..... 56

Concerning the Applications of Flexible Man-Machine Planning Decision-Making Systems in the Context of an Automated Control System For Planning Calculations
(S. V. Chepel; EKONOMIKA I MATEMATICHESKIYE METODY, No 5, Sep-Oct 86)..... 65

Calculation of Volumes of Information-Computational Work in the Industrial Management System of the Republic
(G. G. Oganesyan; PROMYSHLENNOST ARMENII, No 7, Jul 86)..... 74

Organization of Automated Information Processing in USSR Construction Bank Establishments
(A. F. Litvinenko; FINANSY SSSR, No 10, Oct 86)..... 74

Sources of Economic Effectiveness of Introduction of Automated Management Systems
(A. M. Kizhner; FINANSY SSSR, No 10, Oct 86)..... 75

Trends in the Application of Computers For Various Administrative Functions in Lithuanian Industry
(Yu. M. Birbilene, B. Yu. Blazhis, et al.; TRUDY AKADEMII NAUK LITVOSKOY SSR: SERIYA A, No 3, 1986)..... 75

Mechanization of Accounting For Labor and Wages With Microcomputers
(Ye. V. Keda; BUKHGALTERSKIY UCHET, No 5, May 86)..... 76

Machine Processing of Audit Information
(G. A. Solovyev, V. I. Lakis; BUKHGALTERSKIY UCHET, No 5, May 86)..... 77

Automation of Inter-Affiliate Funds Transfer Operations
(P. V. Dyatlov; DENGI I KREDIT, No 7, 1986)..... 77

Automated Data Base of Numerically Controlled Machine Tools
(O. I. Averyanov, Ya. M. Gelshteyn; STANKI I INSTRUMENT, No 5, May 86)..... 78

Automated Subsystem For Modeling and Synthesis of Tracking Electric Drives
(S. A. Avdushev, O. L. Volberg, et al.; STANKI I INSTRUMENT, No 5, May 86)..... 78

Automatic Mini-System For Recording of Geophysical Phenomena
(O. K. Shoniya; SOOBSHCHENIYA AKADEMII NAUK GRUZINSKOY SSR, No 1, Jul 86)..... 79

THEORY OF COMPUTATIONS

Estimation of Parameters in Fully Observable Nonlinear Stochastic Control Systems
(V. V. Mdzinarishvili; SOOBSHCHENIYA AKADEMII NAUK GRUZINSKOY SSR, No 2, Aug 86)..... 80

Coordinated Control in Binary Active Systems
(I. A. Gorgidzye; SOOBSHCHENIYA AKADEMII NAUK GRUZINSKOY SSR, No 2, Aug 86)..... 80

JPRS-UCC-87-007

11 MAY 1987

USSR REPORT

CYBERNETICS, COMPUTERS AND AUTOMATION TECHNOLOGY

CONTENTS

GENERAL

Problems of Improving Economic Mechanism of Computer Centers
(M. Kuter; VESTNIK STATISTIKI, No 10, Oct 86)..... 1

HARDWARE

Semitabular Calculation of Functions in Microprocessors
(G. V. Kantariya; SOOBSHCHENIYA AKADEMII NAUK GRUZINSKOY SSR, No 2, 1986)..... 8

Organization of Interprocessor Communications Channels in a Multiprocessor Computer System
(A. V. Kalyayev, S. Yu. Fomin; ELEKTRONNOYE MODELIROVANIYE, No 5, Sep-Oct 86)..... 11

Methods and Means of Analog-Digital Modeling of Integrated Circuits
(V. V. Denisenka, N. I. Merezhin, et al.; ELEKTRONNOYE MODELIROVANIYE, No 5, Sep-Oct 86)..... 11

Language for Description and Modeling of Parallel Network Control Algorithms
(V. V. Kuzmuk; ELEKTRONNOYE MODELIROVANIYE, No 5, Sep-Oct 86)..... 12

SOFTWARE

Programming of Microprocessors in LYAPAS-M Language
(D. I. Cheremisinov; IZVESTIYA AKADEMII BELORUSSKOY SSR: SERIYA FIZIKO-TEKHNICHESKIKH NAUK, No 3, 1986)..... 13

Computer-Based Terminal Inquiry System for an Industrial Enterprise
(Yu. A. Shafrin, M. V. Rashkovskiy; MEKHANIZATSIYA I AVTOMATIZATSIYA PROIZVODSTVA, No 11, Nov 86)..... 19

APPLICATIONS

Automated Data Bank for Managing Financial and Credit Information
(Ye. R. Kochanova, A. V. Krasavin; MEKHANIZATSIYA I AVTOMATIZATSIYA PROIZVODSTVA, No 4, Apr 86)..... 27

Automation of Materials and Equipment Supply Accounting and Analysis Data
(T. N. Malinovskaya; MEKHANIZATSIYA I AVTOMATIZATSIYA PROIZVODSTVA, No 4, Apr 86)..... 33

Introduction of a Unified Generic System of Designation of Products and Design Documents
(N. S. Mishin; STANDARTY I KACHESTVO, No 11, 1986)..... 37

On Procedure and Rules for Presentation and Handling of Design Data on Magnetic Media Within YeSKD Framework
(Yu. B. Fratkin, A. S. Tretyakov, et al.; STANDARTY I KACHESTVO, No 9, Sep 86)..... 41

Examination of New Procedure for Development and Coordination of Technical Documentation at Regional Meetings
(STANDARTY I KACHESTVO, No 9, Sep 86)..... 48

Mixed Logic and Hardware Modeling of Digital-Analog Apparatus
(A. I. Petrenko, G. D. Kiselev, et al.; ELEKTRONNOYE MODELIROVANIYE, No 5, Sep-Oct 86)..... 55

Book on Evolution of Auto-Wave Vortices Published
(Valentin Izrailevich Krinskiy, Aleksandr Berelyevich Medvinskiy, et al.; NOVOYE V ZHIZNI, NAUKE, TEKHNIKE: SERIYA MATEMATIKA KIBERNETIKA (EVOLYUTSIYA AVTOVOLNOVYKH VIKHREY) No 8, 1986)..... 56

Simulation Models and Methods of Making Decisions in Programming Harvests
(N. F. Bondarenko, R. A. Poleuktov, et al.; DOKLADY VSESOYUZNOGO ORDENA LENINA I ORDENA TRUDOVOGO KRASNOGO ZNAMENI AKADEMII SELSKOKHOZYAYSTVENNYKH NAUK IMENI V. I. LENINA, No 2, Feb 86)..... 58

THEORY OF COMPUTATIONS

Noiseless Coding of Combinatorial Sources, Hausdorf Dimensionality and Kolmogorov Complexity
(B. Ya. Ryabko; PROBLEMY PEREDACHI INFORMATSII, No 3, 1986)..... 63

Two classes of Algorithms for Decoding Based on Minimum Generalized Distance
(S. I. Kovalev; PROBLEMY PEREDACHI INFORMATSII, No 3, 1986)..... 63

Self-Adapting Algorithm for Minimax Nonparametric Estimation of Spectral Density
(S. Yu. Yefroimovich, M. S. Pinsker; PROBLEMY PEREDACHI INFORMATSII, No 3, 1986)..... 64

Quasianalogy and the Problem of Heat Conductivity
(Yu. M. Matsevityy; ELEKTRONNOYE MODELIROVANIYE, No 5, Sep-Oct 86)..... 64

NETWORKS

Transmission of Packets by Blocked Nonmodified Random Multiple Access Stack Algorithm
(B. S. Tsyvakov, S. P. Fedortsov; PROBLEMY PEREDACHI INFORMATSII, No 3, 1986)..... 65

Deadlock Avoidance in Transmission of Information in Computer Systems With Programmable Structure
(E. A. Manakhova; ELEKTRONNOYE MODELIROVANIYE, No 5, Sep-Oct 86)..... 65

Median Filtration of Deterministic and Steady Random Signals
(L. I. Piterbarg; PROBLEMY PEREDACHI INFORMATSII, No 3, 1986)..... 66

Structure and Interaction of Processes in Distributed Automated Data Bases
(I. N. Bacherikov; ELEKTRONNOYE MODELIROVANIYE, No 5, Sep-Oct 86)..... 66

JPRS-UCC-87-008

15 JULY 1987

Soviet books and journal articles displaying a copyright notice are reproduced and sold by NTIS with permission of the copyright agency of the Soviet Union. Permission for further reproduction must be obtained from copyright owner.

SCIENCE & TECHNOLOGY

USSR: COMPUTERS

CONTENTS

GENERAL

Computer Committee Chairman Interviewed
(N. V. Gorshkov Interview; PRAVDA, 17 Aug 86)..... 1

Information Approach to Cognition and Management
(Eduard Semenyuk; OBSHCHESTVENNYYE NAUKI, No 1, Jan 86)... 6

HARDWARE

Microprocessor From 'Start' Program Performs 2 Million Operations a Second
(PRAVDA VOSTOKA, 7 Jan 87)..... 19

Affiliate of Academy Computer Institute Develops Personal Computers
(I. Sergeyeva; PRAVDA, 24 Dec 86)..... 20

Brochure: Microprocessors and Personal Computers
(NOVOYE V ZHIZNI, NAUKE, TEKHNIKE. SERIYA MATEMATIKA, KIBERNETIKA, No 5, 1986)..... 21

Briefs
Field Computer Set Developed 22
Magnetic Memory Discs From Refined Aluminum 22

SOFTWARE

Brochure: Operating Systems
(NOVOYE V ZHIZNI, NAUKE, TEKHNIKE: SERIYA MATEMATIKA, KIBERNETIKA, No 3, 1986)..... 23

USSR-GDR Seminar on Information-Processing Algorithms
(PRAVDA VOSTOKA, 2 Nov 86)..... 25

Programmable Environment Simulator for Planning of Automated Real Time Systems
(M.N. Bukharov, A.Ya. Oleynikov; PROGRAMMIROVANIYE, No 2, Mar-Apr 86)..... 26

Testing of Programs for Parallel Computer Systems with Common Control
(G.N. Kalyanov; PROGRAMMIROVANIYE, No 2, Mar-Apr 86)..... 26

Software Tools for Development of Dialogue Programs
(B. Volozh, M. Kakhro, et al.; PROGRAMMIROVANIYE, No 2, Mar-Apr 86)..... 27

Design Principles of Machine-Independent Linkage Editors and Loaders in Microcomputer Cross Software Systems
(A.A. Levitskiy, M.M. Muchnik; PROGRAMMIROVANIYE, No 2, Mar-Apr 86)..... 28

Organization of Dialogue Mode of Operation of the Normin Information System With the OB Multiterminal System
(A.I. Kitov; Yu.D. Romanova, et al.; PROGRAMMIROVANIYE, No 2, Mar-Apr 86)..... 28

Three Problems in Decentralized Functioning of Ring Architecture Microprocessor Systems
(I.Z. Nafikov, R.M. Nuriyev; PROGRAMMIROVANIYE, No 2, Mar-Apr 86)..... 29

Implementation of the ADA Language on the BESM-6 Computer
(A. A. Krasilov, V. L. Leytes, et al.; PROGRAMMIROVANIYE, No 3, May-Jun 86)..... 29

Approach to Development of Monitors for Process-Oriented Application Program Sets for Small Computers
(N. A. Semenov, Ye.V. Petrov; PROGRAMMIROVANIYE, No 3, May-Jun 86)..... 30

Model of Distribution of Main Memory in Time Sharing Systems
(V. I. Romanov; PROGRAMMIROVANIYE, No 3, May-Jun 86)..... 30

Deadlocks in Asynchronous Coordinated Processes and Their Prevention
(V. N. Krinitskiy; PROGRAMMIROVANIYE, No 4, Jul-Aug 86)... 31

An Effective Algorithm for Optimal Implementation of Transfer Operators
(V. P. Makarov; PROGRAMMIROVANIYE, No 4, Jul-Aug 86)..... 31

Heuristic Problem Solving Principles
(O.V. German; PROGRAMMIROVANIYE, No 4, Jul-Aug 86)..... 32

Representation of Isolines and Sections of a Surface Defined by an Irregular System of Readings
(A. L. Fuks; PROGRAMMIROVANIYE, No 4, Jul-Aug 86)..... 33

About the Problem of Intelligent Automated Programming
(N. A. Krinitskiy; PROGRAMMIROVANIYE, No 5, Sep-Oct 86)... 33

Program Support System in Autocoder Type Language
(G. V. Yermakov, V. L. Katkov; PROGRAMMIROVANIYE, No 5, Sep-Oct 86)..... 34

Two Approaches to the Problem of Dynamic Allocation and Liberation of Memory in Fortran Programs Under OS YeS
(V. K. Glaum; PROGRAMMIROVANIYE, No 5, Sep-Oct 86)..... 34

Formal Model of Directive-Type Dialogue System
(O. V. Pavlyuk, V. V. Rossikov; PROGRAMMIROVANIYE, No 5, Sep-Oct 86)..... 35

Syntactic Analyzer for Information Systems
(S. I. Rau; PROGRAMMIROVANIYE, No 5, Sep-Oct 86)..... 35

THEORY OF COMPUTATIONS

Generation and Statistical Testing of Sequences of N-Distributed Pseudorandom Numbers
(G. V. Dobris; PROGRAMMIROVANIYE, No 2, Mar-Apr 86)..... 36

Algorithmic Data Structure Algebras and Multilevel Program Planning
(G. Ye. Tseytlin; PROGRAMMIROVANIYE, No 3, May-Jun 86).... 36

Linguistic Facilities for Programming 'Asynchronous' Groups of Programs
(V. N. Krinitskiy; PROGRAMMIROVANIYE, No 3, May-Jun 86)... 37

APPLICATIONS

Classification Systems and Documents
(KLASSIFIKATORY I DOKUMENTY, No 11, Nov 86)..... 38

Problems of ASU in Moldavian Agriculture
(T. Platonova; SOVETSKAYA MOLDAVIYA, 30 Jul 86)..... 72

Moscow Notes Progress in Development of Artificial Intelligence
(Moscow International Service, 25 Sep 86)..... 75

Brochure: Probability Automations and Processors
(NOVOYE V ZHIZNI, NAUKE, TEKHNIKE: SERIYA MATEMATIKA, KIBERNETIKA, No 6, 1986)..... 77

NETWORKS

Numerical Methods of Analysis of Routing Processes in Computer Networks
(V. S. Gladkiy, S. L. Gavliyevskiy; PROGRAMMIROVANIYE, No 3, May-Jun 86)..... 79

EDUCATION

Problems with Expanding Computer Training at Medical Schools
(A. Krasnov, I. Korolyuk; MEDITSINSKAYA GAZETA, 19 Dec 86)..... 80

Computer Camp at Pereslavl-Zalesskiy Described
(P. Nikitin; SOVETSKAYA ROSSIYA, 1 Jul 86)..... 82

Programming Language in Russian Defended
(U. Mannanov; PRAVDA VOSTOKA, 12 Aug 86)..... 84

Ideal Computer Classroom Designed
(Editorial Report)..... 86

KASSR: Problem of Equipment in Computer Training
(Editorial Report)..... 87

Learning Operating Environment and Means of its Implementation in OS YeS
(V. B. Dralyuk, R. R. Pashkova; PROGRAMMIROVANIYE, No 5, Sep-Oct 86)..... 88

JPRS-UCC-87-009
16 JULY 1987

Soviet books and journal articles displaying a copyright notice are reproduced and sold by NTIS with permission of the copyright agency of the Soviet Union. Permission for further reproduction must be obtained from copyright owner.

SCIENCE & TECHNOLOGY

USSR: COMPUTERS

CONTENTS

HARDWARE

Session of Designers From Socialist Countries
(SOVETSKAYA MOLDAVIYA, 30 Nov 86) 1

Optimization of Multiprocessor Computer System Configuration
(V.M. Borisenko; AVTOMATIKA I TELEMEKHANIKA, No 12, Dec 86) 2

Use of Reed-Muller Codes in Self-Testing of Circuits
(R.Kh. Latypov; AVTOMATIKA I TELEMEKHANIKA, No 9, Sep 86) 2

Approximation Multicriterion Scheduling in Computer Systems
(V.I. Borzenko, E.A. Trakhtengerts, et al.; AVTOMATIKA I TELEMEKHANIKA, No 9, Sep 86) 3

Interactive System for Logic Modeling of Digital Circuits
(A.M. Vlasov, V.A. Dyboy, et al.; AVTOMETRIYA, No 5, Sep-Oct 86) 3

Automation of Digital Processing and Recording of Holographic Interferograms
(A.N. Grishanov, S.T. De, et al.; AVTOMETRIYA, No 5, Sep-Oct 86) 4

System for Digital Analysis of Fields of Heterogeneous Deformations Using Applied Holographic Interferometers
(V.N. Sarnadskiy; AVTOMETRIYA, No 5, Sep-Oct 86) 5

Bipolar Integrated Circuit Component Modeling Software
(A.I. Adamsone, V.S. Polskiy, et al.; AVTOMETRIYA, No 5, Sep-Oct 86) 5

EFES Software for Modeling Statistical Characteristics of MOS Structures
(N.I. Gorbenko; AVTOMETRIYA, No 5, Sep-Oct 86) 6

SOFTWARE

One Approach to Designing the Physical Organization of a Relational Data Base
(V.A. Kurylev; AVTOMATIKA I TELEMEKHANIKA, No 12, Dec 86) 7

Interaction of Parallel Cyclical Processes in Multiprocessor Computer Systems
(Ye.L. Kulida; AVTOMATIKA I TELEMEKHANIKA, No 12, Dec 86) 7

APPLICATIONS

Classification Systems and Documents
(L.P. Akimov; KLASSIFIKATORY I DOKUMENTY, No 8, Aug 86) 9

Classification Features of Automated Data Processing Systems
(L.B. Venchkovskiy, I.T. Rudnik; KLASSIFIKATORY I DOKUMENTY, No 8, Aug 86) 12

Linguistic Means and Software for Collective-Use Terminal Reference System [TSSKP] (Language for Interaction of End Users With TSSKP)
(A.S. Kovalev, G.I. Ksenda; KLASSIFIKATORY I DOKUMENTY, No 8, Aug 86) 16

Using Machine-Oriented Master Document for Design Document for Purposes of Introducing Scientific-Engineering Achievements
(S.N. Konoplev; KLASSIFIKATORY I DOKUMENTY, No 8, Aug 86) 23

Experience of Introduction and Management of Classification Systems in USSR Ministry of Power and Electrification
(S.I. Alekseyeva, I.D. Dzhura, et al.; KLASSIFIKATORY I DOKUMENTY, No 8, Aug 86) 27

Automated System for Maintaining All-Union Classification Systems in Ministry of Tractor and Agricultural Machine Building
(V.M. Solovyev, V.Ye. Marmazinskiy; KLASSIFIKATORY I DOKUMENTY, No 8, Aug 86) 30

Experience of Creation of Republic Automated System for Management of All-Union Classification Systems of Technical and Economic Information in Estonian SSR
(Kh.P. Kaps, I.A. Kyumnik; KLASSIFIKATORY I DOKUMENTY, No 8, Aug 86) 33

Computerized Primer
(Angel Andreyevski; LENINSKOYE ZNAMYA, 25 Oct 86) 36

Mathematical Model of Evolution of Demographic Behavior. I. The Basic Model. Natural Section of Behavior
(A.Yu. Buzin, I.G. Pospelov; AVTOMATIKA I TELEMEKHANIKA, No 12, Dec 86) 38

Production-Transport Problem of Optimal Placement of Enterprises Considering the Sequence of Their Creation
(N.D. Astokhov; AVTOMATIKA I TELEMEKHANIKA, No 9, Sep 86) 38

Optimal Control in Developing Multicriterion Production Systems
(B.A. Vlasyuk; AVTOMATIKA I TELEMEKHANIKA, No 9, Sep 86) 39

Quasi-Order Design Procedure in a Set of Multicriterion Alternatives Based on Reliable Information of Preferences of the Person Making the Decision
(L.S. Gnedenko, O.I. Larichev, et al.; AVTOMATIKA I TELEMEKHANIKA, No 9, Sep 86) 39

Digital System for Collection and Preprocessing of Hydrophysical Information
(V.A. Belomestinkh, V.N. Byukhin, et al.; AVTOMETRIYA, No 5, Sep-Oct 86) 40

Software Implementation of a Learning Classifier of Two-Dimensional Fields in a Digital Information Processing System
(G.I. Peretyagin; AVTOMETRIYA, No 5, Sep-Oct 86) 41

THEORY OF COMPUTATIONS

Use of Asymptotic Expansions to Estimate Distributions of Non-Gaussian Stochastic Processes (2. Results of Mathematical Modeling)
(Y.Y. Baltrunas, V.Yu. Rudzkene, et al.; TRUDY AKADEMII NAUK LITOVSKOY SSR. SERIYA B, No 3, 1986) 42

Combined Control Systems in One Quality Dynamics Problem
(V.A. Gelovani, Yu.F. Pronozin, et al.; DOKLADY AKADEMII NAUK SSSR, No 1, 1986) 43

Adaptive Control of Finite Automata With Unobservable States
(M.G. Konovalov; DOKLADY AKADEMII NAUK SSSR, No 1, 1986) 43

Synthesis of One Class of Adaptive Automatic Control System With Rigid Structure. I. Asymptotic Properties of Roots of Characteristic Equations of Control Systems Which Are Stable With Unlimited Increase in Gain
(L.D. Lozinskiy, M.V. Meyerov; AVTOMATIKA I TELEMEKHANIKA, No 9, Sep 86) 44

Structured Approach to Systems Analysis
(M.Kh. Dorri; AVTOMATIKA I TELEMEKHANIKA, No 12, Dec 86) 44

Theory of Functional Diagnosis of Discrete Dynamic Systems
(V.V. Danilov, A.N. Zhirabok; AVTOMATIKA I TELEMEKHANIKA, No 12, Dec 86) 45

Design of Linguistic Devices Based on Fuzzy Logic
(V.D. Baronets; AVTOMATIKA I TELEMEKHANIKA, No 12, Dec 86) 45

Digital Interpolators of Curved Trajectories
(N.S. Anishin; AVTOMATIKA I TELEMEKHANIKA, No 12, Dec 86) 46

Active Identification With Adaptive Control
(A.M. Talalay; AVTOMATIKA I TELEMEKHANIKA, No 9, Sep 86) 46

Use of Sequences of Signals in Construction of Tests for Networks of Automata. II. Networks Without Feedback
(A.G. Birger, Ye.T. Gurvich; AVTOMATIKA I TELEMEKHANIKA, No 9, Sep 86) 47

NETWORKS

Analytic Model of Random Multiple Access to a Local Area Network
(G.P. Basharin, V.A. Yefimushkin; AVTOMATIKA I TELEMEKHANIKA, No 12, Dec 86) 48

Estimating Information Reliability in Small Local Area Networks
(V.S. Podlazov, P.Ya. Yalkapov; AVTOMATIKA I TELEMEKHANIKA, No 12, Dec 86) 48

EDUCATION

Course on Computational Mathematics and Computer Technology in the Chemical Engineering VUZ
(A.I. Boyarinov; ZHURNAL VSESOYUZNOGO KHIMICHESKOGO OBSHCHESTVA IM. D.I. MENDELEYEV, No 4, 1986) 50

/13046

JPRS-UCC-87-010

28 JULY 1987

Soviet books and journal articles displaying a copyright notice are reproduced and sold by NTIS with permission of the copyright agency of the Soviet Union. Permission for further reproduction must be obtained from copyright owner.

SCIENCE & TECHNOLOGY

USSR: COMPUTERS

CONTENTS

GENERAL

PRAVDA Views Role of Information Technology
(A. Rakitov; PRAVDA, 23 Jan 87) 1

Socialist-Bloc Conference on Small-Computer Development
(PRAVDA VOSTOKA, 29 Nov 86) 7

Long-Awaited Computer
(S. Mindelevich; TEKHNIKA I NAUKA, No 12, Dec 86) 8

HARDWARE

Maximum Speed of Ring Data Exchange Devices for Parallel Computer Systems
(S.I. Uvarov, M.A. Chernyshov; AVTOMATIKA I TELEMEKHANIKA, No 10, Oct 86) 16

Computer Application of State-Prize Work on Molecular Spectroscopy
(N. Grigoryeva; SOVETSKAYA ESTONIYA, 21 Jan 87) 17

Prize Recipient for Work on Molecular Spectroscopy
(LENINSKOYE ZNAMYA, 29 Nov 86) 18

Prize Recipient for Work on Molecular Spectroscopy
(LENINSKOYE ZNAMYA, 21 Dec 86) 19

Recipient of State Prize for Selective Spectroscopy
(SOVETSKAYA ESTONIYA, 9 Dec 86) 20

Sodalite Glass With Erasable Memory Stores Optical Information
(IZVESTIYA, 5 Jan 87) 21

Design Automation of LSI Circuits in Multiprocessor Computer System With Common Flow of Instructions
(M.S. Sonin, V.V. Shvedenko; AVTOMATIKA I TELEMEKHANIKA, No 7, Jul 86) 22

SOFTWARE

FRG Firm To Provide Software System Scientex to Soviets
(DIE COMPUTER ZEITUNG, 16 Jun 86) 23

Recurrent Model of Multilevel Automated Experimental Research Systems
(V.V. Belosh, M.B. Ignatev, et al.; DOKLADY AKADEMII NAUK SSSR, No 4, 1986) 25

Mathematical Principles of Semantic Programming
(S.S. Goncharov, D.I. Sviridenko; DOKLADY AKADEMII NAUK SSSR, No 6, 1986) 26

Interaction of Parallel Processes in the Operating System of the PS-3000
(A.Z. Ioshpa, P.G. Miroshnichenko, et al.; AVTOMATIKA I TELEMEKHANIKA, No 6, Jun 86) 26

Fragmentation of Relational Expression in Processing Requests in Relational Data Base Management Systems
(M.Yu. Khodzhayants; AVTOMATIKA I TELEMEKHANIKA, No 7, Jul 86) 27

Principles of Creation of the Collegiate 'Akademsintez' Logical Planning Application Software Set
(V.P. Chistov; AVTOMATIKA I TELEMEKHANIKA, No 7, Jul 86) 27

Use of Information Redundancy To Restore Programs
(I.V. Shagayev; AVTOMATIKA I TELEMEKHANIKA, No 7, Jul 86) 28

APPLICATIONS

The Principles of Organizing a Programming System for Geological and Geophysical Problems (Using the 'MR' System as an Example
(A.A. Ibrayev, Ye.N. Nusipov; VESTNIK AKADEMII NAUK KAZAKHSTOY SSR, No 11, Nov 86) 29

Integrated ASU Introduced
(L. Golubeva, B. Sobolev; NARODNOYE KHOZYAYSTVO BELORUSSII, No 11, Nov 86) 34

Renovation of Galvanic Production Plant
(V. Katsuk; NARODNOYE KHOZYAYSTVO BELORUSSII, No 11, Nov 86) 40

Classification Systems and Documents: Collected Scientific and Reference Papers
(O.A. Chertishchev, N.N. Fedotov, et al.; KLASSIFIKATORY I DOKUMENTY, No 10, Oct 86) 42

Feedback in Iterative Expert Procedures
(M.V. Shneyderman; AVTOMATIKA I TELEMEKHANIKA, No 7, Jul 86) 71

Probablistic Selection of Alternatives
(R.P. Sheynin; AVTOMATIKA I TELEMEKHANIKA, No 6, Jun 86) 71

Interconnection of Operational Control of Production and Local Optimization of Installations at Enterprises With Continuous Production Processes
(V.G. Gaytsgori, E.L. Itskovich, et al.; AVTOMATIKA I TELEMEKHANIKA, No 6, Jun 86) 72

Models of Servicing Machine Tools in Flexible Production Systems
(Ya.A. Kogan, L.Yu. Lishinskiy, et al.; AVTOMATIKA I TELEMEKHANIKA, No 6, Jun 86) 72

Briefs
Briz Automated System 74
Computers in Machine Building 74

THEORY OF COMPUTATIONS

Differential Mixed Strategy Game
(A.N. Yermolov, B.S. Kryakovskiy, et al.; AVTOMATIKA I TELEMEKHANIKA, No 10, Oct 86) 75

Synthesis of Class of Rigidly Structured Automatic Control System With Adaptive Properties. Part II. Methods of Synthesis of Control System Structure for Singly Connected and Objects With Multiple Connections
(L.D. Lozinskiy, M.V. Meyerov; AVTOMATIKA I TELEMEKHANIKA, No 10, Oct 86) 75

Segmentation of Images by Covering the Plane With Voronoy Polygons
(O.S. Agaronyan; AVTOMATIKA I TELEMEKHANIKA, No 10, Oct 86) 76

Synthesis of Multistep Selection Schemes
(L.A. Shlomov, D.B. Yudin; AVTOMATIKA I TELEMEKHANIKA, No 10, Oct 86) 77

Automation of Linear Analysis of Continuous Control Systems
(M.Kh. Dorri, N.Yu. Milovanova; AVTOMATIKA I TELEMEKHANIKA, No 10, Oct 86) 77

Computation Aspects of a Modified Algorithm for Constructing Sequences of Plans for Discrete Optimization
(Z.Sh. Puturidze; SOOBSHCHENIYA AKADEMII NAUK GRUZINSKOY SSR, No 3, Jun 86) 78

Statistical Linearization and Recurrent Dispersion Identification
(F.F. Pashchenko, G.R. Bolkvadze; SOOBSHCHENIYA AKADEMII NAUK GRUZINSKOY SSR, No 3, Jun 86) 78

Controllability Criteria of Nonlinear Systems With Phase Limitations
(S.V. Yemelyanov, S.K. Korovin, et al.; DOKLADY AKADEMII NAUK SSSR, No 1, Sep 86) 79

Relay Control Based on Algorithm With Predicting Model
(V.N. Bykov, N.Ye. Zubov; AVTOMATIKA I TELEMEKHANIKA, No 6, Jun 86) 79

Problem of Vibration Stabilization for Nonlinear Dynamic Systems
(A.M. Trakhtenberg; AVTOMATIKA I TELEMEKHANIKA, No 6, Jun 86) 80

Control of a Program System in a Computer as a Variation Problem
(G.M. Aleshenko; AVTOMATIKA I TELEMEKHANIKA, No 6, Jun 86) 80

Minimum Processes of Limited Capacity in Production Networks
(S.V. Lapshin; AVTOMATIKA I TELEMEKHANIKA, No 7, Jul 86) 81

Use of Three-Dimensional Stochastic Networks To Model Transportation Process
(Yu.A. Shulga; AVTOMATIKA I TELEMEKHANIKA, No 7, Jul 86) 81

The 'Malfunction' Problem for a Pointwise Random Process
(G.I. Salov; AVTOMATIKA I TELEMEKHANIKA, No 7, Jul 86) 82

EDUCATION

New Computer Center Established
(I. Rozumbayev; SOVET TURKMENISTANY, 3 Oct 86) 83

Mobile Computer Classrooms
(TELEVISION SERVICE, 16 Jan 87) 84

School Computer Equipment Highlighted
(T. Rakhmanov; MUGALLYMLAR GAZETI, 12 Oct 86) 85

Engineering Students Learn To Use Computerized Work Stations
(PRAVDA, 17 Nov 86) 86

/13046

JPRS-UCC-87-011

29 JULY 1987

Soviet books and journal articles displaying a copyright notice are reproduced and sold by NTIS with permission of the copyright agency of the Soviet Union. Permission for further reproduction must be obtained from copyright owner.

SCIENCE & TECHNOLOGY

USSR: COMPUTERS

CONTENTS

GENERAL

Inefficient Use of Computer Centers in Tadkhikistan Scored
(I. Soliyev; EKONOMICHESKAYA GAZETA, No 43, Oct 86)..... 1

Lack of Coordination in Computer Development Criticized
(A. Tikhonov; PRAVDA, 20 Oct 86)..... 4

Functions of Computer Center Dispatcher Services Discussed
(B. Panshin; EKONOMICHESKAYA GAZETA, No 35, Aug 86)..... 8

HARDWARE

Work on Automated Particle Track Scanner Recounted
(B. A. Utochkin; NAUKA V SSSR, No 5, Sep-Oct 86)..... 11

Bulgarian Computers and Data-Processing Equipment Spotlighted
(PRILOZHENIYE K EKONOMICHESKOY GAZETE, No 46, Nov 86)..... 16

Diagnosis of Microprogram Control Unit of Microprogramable Microprocessor Systems
(V. N. Balakin, A. S. Kalendarev, et al.; AVTOMATIKA I VYCHISLITELNAYA TEKHNIKA, No 3, May-Jun 86)..... 19

Design of Combination Devices by Linearization Methods
(A. N. Sychev; AVTOMATIKA I VYCHISLITELNAYA TEKHNIKA, No 4, Jul-Aug 86)..... 20

Simulation of a Multiprocessor Computer System With Hierarchical Main Memory
(O. M. Brekhov, A. I. Slutskin; AVTOMATIKA I VYCHISLITELNAYA TEKHNIKA, No 5, Sep-Oct 86)..... 21

Algorithmic Method of Designing Operating Structures of Electronic Digital Computers
(M. A. Gladshteyn; AVTOMATIKA I VYCHISLITELNAYA TEKHNIKA, No 5, Sep-Oct 86)..... 22

Parallel Logic Controllers Implemented on the Basis of Standard Prom Devices
(I. A. Furman; AVTOMATIKA I VYCHISLITELNAYA TEKHNIKA, No 5, Sep-Oct 86)..... 23

APPLICATIONS

Social Information and the Computer
(E. Burdyukova, V. Khokhlov; TEKHNIKA I NAUKA, No 7, Jul 86)..... 24

Improved Computer Use in Armenian Chemical Industry Urged
(A. Tatevosyan; KOMMUNIST, 13 Oct 86)..... 27

Best Operators for Computer System of Ukrainian SSR Central Statistical Administration
(Z. Krichevskaya; VESTNIK STATISTIKI, No 9, Sep 86)..... 30

Book: Conflict Theory
(Nikolay Serafimovich Kukushkin, Olga Rostislavovna Menshikova, et al.; NOVOYE V ZHIZNI, NAUKE, TEKHNIKE: SERIYA MATEMATIKA, KIBERNETIKA (KONFLIKTY I KOMPROMISSY), No 9, 1986)..... 39

NETWORKS

Interface Between Application Programs and Session Level of Local Area Networks
(A. N. Domaratskiy, V. V. Nikiforov; AVTOMATIKA I VYCHISLITELNAYA TEKHNIKA, No 3, May-Jun 86)..... 43

Principles of Implementation of Multifunctional Integrated Network Service
(E. V. Zinovev, A. A. Strekalev, et al.; AVTOMATIKA I VYCHISLITELNAYA TEKHNIKA, No 3, May-Jun 86)..... 44

Method of Monitoring Communications Channels in Computer Networks
(I. M. Bukin; AVTOMATIKA I VYCHISLITELNAYA TEKHNIKA, No 3, May-Jun 86)..... 45

Diagnostic Support of Local Area Networks
(V. A. Kizub; AVTOMATIKA I VYCHISLITELNAYA TEKHNIKA, No 3, May-Jun 86)..... 46

Transport Radio Network Hardware
(A. P. Voyter, R. G. Ofengenden; AVTOMATIKA I VYCHISLITELNAYA TEKHNIKA, No 3, May-Jun 86)..... 47

Reliability of Ones-Counting and Signature Analysis in Monitoring and Diagnosis of Discrete Network Structures
(V. N. Yarmogik, Ye. I. Katsnelvon; AVTOMATIKA I VYCHISLITELNAYA TEKHNIKA, No 3, May-Jun 86)..... 48

Model of Network Interaction Oriented Toward Implementation of a Protocol
(M. L. Mirimov; AVTOMATIKA I VYCHISLITELNAYA TEKHNIKA, No 4, Jul-Aug 86)..... 49

Optimization of Placement of Remote Information Concentrators in a Centralized Data Transmission Network Considering Communications Channel Reliability
(G. F. Yanbykh; AVTOMATIKA I VYCHISLITELNAYA TEKHNIKA, No 4, Jul-Aug 86)..... 50

Principles of Design of Local Computer Network for Message Switching Center
(Yu. A. Mamatov, N. M. Badin, et al.; AVTOMATIKA I VYCHISLITELNAYA TEKHNIKA, No 4, Jul-Aug 86)..... 51

Adaptive Time Sharing Computer Center Scheduler for Computer Network Information-Control Service
(S. V. Nazarov, A. A. Primakov, et al.; AVTOMATIKA I VYCHISLITELNAYA TEKHNIKA, No 4, Jul-Aug 86)..... 52

Optimization of the Structure of an Information-Computer Network by the Method of Branches and Bounds
(G. F. Yanbikh; AVTOMATIKA I VYCHISLITELNAYA TEKHNIKA, No 5, Sep-Oct 86)..... 53

Study of Throughput Capacity of User Systems in a Local Computer Network
(B. Ya. Ettinger, Z. A. Rozenberg; AVTOMATIKA I VYCHISLITELNAYA TEKHNIKA, No 5, Sep-Oct 86)..... 54

Combined Models as a Means of Integrated Investigation and Software Implementation of Computer Network Protocols
(G. Y. Pranyavichyus; AVTOMATIKA I VYCHISLITELNAYA TEKHNIKA, No 6, Nov-Dec 86)..... 55

Method of Analyzing Correctness of Protocol Specification
(I. K. Rakova, N. N. Smirnova; AVTOMATIKA I VYCHISLITELNAYA TEKHNIKA, No 6, Nov-Dec 86)..... 56

Modeling of Petri Networks of Logic Control Algorithms
(A. D. Zakrevskiy; AVTOMATIKA I VYCHISLITELNAYA TEKHNIKA, No 6, Nov-Dec 86)..... 57

Formal Description of Network Systems in Predicate Logic Language
(I. M. Gurevich; AVTOMATIKA I VYCHISLITELNAYA TEKHNIKA, No 6, Nov-Dec 86)..... 58

Means for Description and Modeling of Computer Network Protocols in SDL
(G. L. Ionin, V. V. Supe; AVTOMATIKA I VYCHISLITELNAYA TEKHNIKA, No 6, Nov-Dec 86)..... 59

Approach to Reliable Hardware Implementation of Physical Level Protocols for Network Architecture
(V. I. Varshavskiy, V. B. Marakhovskiy, et al.; AVTOMATIKA I VYCHISLITELNAYA TEKHNIKA, No 6, Nov-Dec 86)..... 60

EDUCATION

Computer in the School
(Modris Eglays; NAUKA I TEKHNIKA, No 7, Jul 86)..... 61

/12223

JPRS-UCC-87-012
11 AUGUST 1987

SCIENCE & TECHNOLOGY

USSR: COMPUTERS

CONTENTS

GENERAL

Computer Science Institute Director Discusses Computerization Progress, Policy
(O. Chulkov; ZHURNALIST, No 11, Nov 86) 1

HARDWARE

USSR, Bulgaria Produce 32-Bit Minicomputer
(TASS, 1342 GMT, 17 Dec 86) 10

Analysis of Control Structure of Multiprocessor Computer Systems
(S.I. Uvarov; AVTOMATIKA I TELEMEKHANIKA, No 4, Apr 86) 11

Planning of Fully Self-Testing Monitoring Systems of Programmable Logic Arrays
(L.V. Derbunovich, V.V. Neshveyev; AVTOMATIKA I TELEMEKHANIKA, No 4, Apr 86) 11

Approve the Laser for Operation
(M. Zarutskiy; SOVETSKAYA LATVIYA, 27 Dec 86) 12

How To Translate an Idea
(L. Grinis; SOVETSKAYA LITVA, 6 Jan 87) 15

SOFTWARE

On Forms of Representation of Principle Algorithms for Processing Economic Information
(A.B. Lerner; KLASSIFIKATORY I DOKUMENTY, No 12, Dec 86) 19

Optimization Software for Computers Based on Game Models
(V.O. Groppen, AVTOMATIKA I TELEMEKHANIKA, No 8, Aug 86) 25

Problems of Documenting Activity of Data Bank Administration Service
(L.I. Yefremova; KLASSIFIKATORY I DOKUMENTY, No 12, Dec 86) 26

One Method of Text Compression of Classifier Item. Proposed Method of Compression
(A.V. Goroshetchenko; KLASSIFIKATORY I DOKUMENTY, No 12, Dec 86) 32

Study of Accuracy of Hybrid Systems With Random Time Quantization
(A.S. Shalamov; AVTOMATIKA I TELEMEKHANIKA, No 8, Aug 86) 41

Modular Method of Branches and Bounds
(Yu.S. Afonin; AVTOMATIKA I TELEMEKHANIKA, No 8, Aug 86) 41

Use of Signal Sequences in Construction of Tests for Networks of Automata. I. Computation of Generalized Asynchronous Sequences
(A.G. Birger, Ye.T. Gurvich; AVTOMATIKA I DOKUMENTY, No 8, Aug 86) 42

Two Diagnostic Models of Distributed Digital Systems
(Yu.Yu. Bogdanov; AVTOMATIKA I TELEMEKHANIKA, No 8, Aug 86) 42

Syntactical Analysis Using Cellular-Automata Grammars
(A.I. Prangishvili; AVTOMATIKA I TELEMEKHANIKA, No 8, Aug 86) 43

Existence and Design of Stable Modes in Relay Systems
(A.V. Pokrovskiy; AVTOMATIKA I TELEMEKHANIKA, No 4, Apr 86) 43

Mathematical Modeling of Heterogeneous Random Fields and Unsteady Processes
(Yu.I. Palagin, S.V. Fedorov, et al.; AVTOMATIKA I TELEMEKHANIKA, No 4, Apr 86) 43

Methods of Control in Adaptive Systems With an Identifier With Constant and Variable Conditional Dispersion
(D.M. Lepskiy, F.A. Ovsepyan; AVTOMATIKA I TELEMEKHANIKA, No 4, Apr 86) 44

One Approach to Determining Defects in Linear Dynamic Systems
(G.G. Paramonova; AVTOMATIKA I TELEMEKHANIKA, No 4, Apr 86) 44

APPLICATIONS

Lest We Reinvent the Wheel
(D. Mekhtiyev; BAKINSKIY RABOCHIY, 23 Jan 87) 46

Creating Databases for Spare Parts for Coal Machine-Building Products
(K.V. Lotsmanov, O.F. Mikulina, et al., KLASSIFIKATORY I DOKUMENTY, No 12, Dec 86) 48

Unionwide Classifier of Technical and Economic Indicators in Heavy and Transport Machine Building Sector
(A.D. Arsyukova, A.V. Shandor; KLASSIFIKATORY I DOKUMENTY, No 12, Dec 86) 52

Nomenclature Classification of Quality Indicators of Nonfood Merchandise
(T.M. Maksudov; KLASSIFIKATORY I DOKUMENTY, No 12, Dec 86) 55

Standardization of Management Documents - One of Methods of Qualitative Increase of Their Effectiveness
(V.I. Kokorev; KLASSIFIKATORY I DOKUMENTY, No 12, Dec 86) 61

Experience of Automated Specific List Management
(L.P. Akimov, A.B. Zaikin; KLASSIFIKATORY I DOKUMENTY, No 12, Dec 86) 66

Redistribution of Labor Resources in Active Systems
(V.V. Andrusevich, V.N. Burkov; AVTOMATIKA I TELEMEKHANIKA, No 8, Aug 86) 71

Combined Selection of a Plan and Economic Mechanism With Uncertainty
(V.V. Tokarev; AVTOMATIKA I TELEMEKHANIKA, No 4, Apr 86) 71

Solution of Certain Mathematical Problems of Computer Tomography
(V.Ya. Arsenin, I.B. Rubashov; VESTNIK MOSKOVSKOGO UNIVERSITETA. SERIYA 15: VYCHISLITELNAYA MATEMATIKA I KIBERNETIKA, No 3, 1986) 72

Computerized Printing Plant To Open in 1987
(KOMMUNIST, 11 Oct 86) 73

Role of Computers in Medicine
(SOVET TURKMENISTANY, 21 Sep 86) 74

Briefs
Computer Medical Examination 75

NETWORKS

Approach to Reduced Description of Large-Scale Systems. Part 2. Large Channel-Switching Networks
(V.V. Marbukh; AVTOMATIKA I TELEMEKHANIKA, No 8, Aug 86) 76

PUBLICATIONS

Book: Control Applications of Computers
(Yu.I. Shokin; PRIMENENIYE EVM V ZADACHAKH UPRAVLENIYA, 1985) 77

Application of Computers to the Management of a Production Complex With a Continuous Production Process
(A. R. Bubyakin, V. I. Volkov, et al.;)..... 78

Method of Analyzing Nonsteady-State Modes in Optimal Control Systems for Complex Objects With Distributed Parameters
(N. D. Demidenko)..... 79

Management Automation
(I. G. Zubok, B. N. Nefedov)..... 79

Control of Linear Dynamic Systems Under Conditions of Nonparametric Indeterminacy
(A. A. Ivanilov)..... 79

Production of Data Processing Software in Control Applications by a Generation Technique
(N. N. Karpov)..... 79

Adaptive Method for Solving Systems of Linear Equations in Geophysics
(V. A. Kochnev)..... 80

Optimal Control of Laser Beams
(I. V. Krasnov, N. Ya. Shaparev, et al.)..... 80

Simulation of Complex Biomedical Systems Under Conditions of Structural Indeterminacy
(A. V. Lapko)..... 80

Hybrid Algorithms for the Identification of Static Objects: Construction Principles, Property Analysis and Application
(A. V. Lapko, L. T. Tolstov)..... 80

On Design of Nonparametric Adaptation Algorithms
(A. V. Medvedev)..... 81

Automation of Information Processing and Decision Making in Equipment Testing Applications
(V. K. Merkulov, A. A. Ivanilov, et al.)..... 81

Determination and Estimation of Certain Functionals From Probability Density Functions in Statistical Problem With Two Samples
(G. P. Morozov)..... 81

Control of Moving Mechanical System With Multiple Criteria in Interactive Mode With Computer
(V. A. Okhorzin)..... 81

Experience With Development of Machine-Independent Set of Programs
(L. B. Chubarov, E. V. Chubarova, et al.)..... 82

Problems of Territorial Management Automation System Development in Krasnoyarskiy Kray
(Yu. I. Shokin, D. M. Frumin)..... 82

EDUCATION

Kazakh School Buys Japanese Computers But No Service
(G. Yakimenko; SOTSIALISTIK QAZAQSTAN, 29 Oct 86) 83

Establishment of Republic Computer Training Center Urged
(F. Magsudov; KOMMUNIST, 27 Sep 86) 84

Introduction of Computers in Schools Discussed
(S.S. Zakaryan; AYASTANI ARDYUNABERUTYUN, No 5, 1986) 85

/13046

JPRS-UCC-87-013

8 SEPTEMBER 1987

Soviet books and journal articles displaying a copyright notice are reproduced and sold by NTIS with permission of the copyright agency of the Soviet Union. Permission for further reproduction must be obtained from copyright owner.

SCIENCE & TECHNOLOGY

USSR: COMPUTERS

CONTENTS

THEORY OF COMPUTATIONS

Possibility of Measurement of the Mass of a Body in Inertial and Noninertial Systems of Reference
(V. V. Katsygin, G. I. Sidorenko; DOKLADY AKADEMII NAUK BSSR, No 10, 1986)..... 1

Single-Contour Systems With Several Nonlinearities Satisfying the Generalized Eiserman-Kalman Hypothesis
(M. I. Gil'; DOKLADY AKADEMII NAUK SSSR, No 6, 1987)..... 1

Forced Oscillations in Systems With Hysteresis Nonlinearities
(A. M. Krasnosel'skiy; DOKLADY AKADEMII NAUK SSSR, No 5, Feb 87)..... 2

Filtration, Control, Detection Upon Sudden Breakdown
(I. A. Boguslavskiy; DOKLADY AKADEMII NAUK SSSR, No 1, 1987)..... 2

APPLICATIONS

Automation of Production
(S. A. Ivanov; SELSKOYE KHOZYAYSTVO BELORUSSII, No 1, Jan 86)..... 3

Classification Systems and Documents, No 9, 1986
(KLASSIFIKATORY I DOKUMENTY, No 9, 1986)..... 7

Computer-Aided Design of Data Base Organization and Management for Automated Control Systems by Using a Personal Computer
(N. Yu. Kovalkova; KLASSIFIKATORY I DOKUMENTY, No 9, Sep 86)..... 9

Revision of Classification System for Manufacturing Operations in Machine Building and Instrument Making in the Technical Test Section
(V. N. Chupyrin, L. A. Sergeyeva; KLASSIFIKATORY I DOKUMENTY, No 9, Sep 86)..... 14

Determining Economic Effectiveness of Introduction of Unified Documentation Systems
(N. G. Palamarchuk; KLASSIFIKATORY I DOKUMENTY, No 9, Sep 86)..... 17

Dynamics of Changes to Classification Part of Unionwide Classification System for Industrial and Agricultural Products
(G. S. Valuyeva, Z. G. Kozina, et al.; KLASSIFIKATORY I DOKUMENTY, No 9, Sep 86)..... 24

Experience of Automated Maintenance of Sector Technological Classification Systems
(V. V. Barinov, L. P. Reimzova, et al.; KLASSIFIKATORY I DOKUMENTY, No 9, Sep 86)..... 27

Sector Automated System for Centralized Maintenance of Classification Systems for USSR Ministry of Education
(A. L. Litvina, B. V. Perlov; KLASSIFIKATORY I DOKUMENTY, No 9, Sep 86)..... 30

Your Assistant--The Programmable Microcalculator
(G. T. Kleyman, O. A. Subotin, et al.; TEKHNIKA V SELSKOM KHOZYAYSTVE, No 12, Dec 86)..... 35

The Programmable Microcalculator at Work
(O. A. Subotin; TEKHNIKA V SELSKOM KHOZYAYSTVE, No 12, Dec 86)..... 39

Using a Programmable Microcalculator for Cost Analysis
(V. T. Nadykto, P. S. Savenko; TEKHNIKA V SELSKOM KHOZYAYSTVE, No 12, Dec 86)..... 50

Book: Electronic Trainers
(NOVOYE V ZHIZNI, NAUKE, TEKHNIKE: SERIYA RADIOELEKTRONIKA I SVYAZ': ELEKTRONNYYE TRENAZHERY, No 5, 1986)..... 54

Automation Helps Man
(K. Leet, P. Silma; MATERIALNO-TEKHNICHESKOYE SNABZHENIYE, No 6, Dec 1985)..... 61

PUBLICATIONS

Book: Mathematical Methods for Analyzing Controlled Processes (N. Ye. Kirin; MATEMATICHESKIYE METODY ANALIZA UPRAVLYAYEMYKH PROTSESSOV, 1986)..... 66

/5915

JPRS-UCC-87-014

9 SEPTEMBER 1987

Soviet books and journal articles displaying a copyright notice are reproduced and sold by NTIS with permission of the copyright agency of the Soviet Union. Permission for further reproduction must be obtained from copyright owner.

SCIENCE & TECHNOLOGY

USSR: COMPUTERS

CONTENTS

HARDWARE

Large Soviet Computers Reviewed
(J. Rajman; INFORMATIQUE, 8 Sep 86)..... 1

SP-8 Signal Processor
(A. V. Berezovskiy, V. A. Kozlachkov, et al.; AVTOMETRIYA, No 4, Jul-Aug 86)..... 4

24-Bit CAMAC Standard Computer
(G. S. Piskunov, S. V. Tararyshkin; AVTOMETRIYA, No 4, Jul-Aug 86)..... 5

Communications Hardware in Multiprocessor Standardized Interactive 'Kulon' Type Graphic Systems
(A. M. Vlasov, V. A. Dyboy, et al.; AVTOMETRIYA, No 4, Jul-Aug 86)..... 5

Automated Workstation For Statistical Data Processing
(D. Dayitbegov; VESTNIK STATISTIKI, No 11, Nov 86)..... 6

Computer Speaks and Listens
(I. Ya. Bilinskiy; NAUKA I TEKHNIKA, No 11, Nov 86)..... 7

Memory For Biocomputer
(O. Kolin; TEKHNIKA I NAUKA, No 11, Nov 86)..... 12

Asymptotic Analysis of Effectiveness of Cache Memory in Multiprocessor Systems
(Ya. A. Kogan, A. I. Lyakhov, et al.; AVTOMATIKA I TELEMEKHANIKA, No 1, Nov 86)..... 18

Analysis of Dynamic Errors of Digital Control Systems Resulting From Asynchronous Information Exchange
(A. M. Shevchenko; AVTOMATIKA I TELEMEKHANIKA, No 1, Nov 86)..... 18

SOFTWARE

Design of Distributed Control Systems For Large Electrophysical Installations Based on Networks of Specialized Microcomputers At the Institute of Nuclear Physics, Siberian Division, USSR Academy of Sciences, and Their Software
(A. N. Aleshayev, S. D. Belov, et al.; AVTOMETRIYA, No 4, Jul-Aug 86)..... 20

Software For Information Exchange in Multiprocessor Interactive 'Kulon' Type Graphic Systems
(A. M. Vlasov, V. Ye. Mezhov, et al.; AVTOMETRIYA, No 4, Jul-Aug 86)..... 21

Comparison and Optimization of the Real Speed of YeS Computer Operating Systems
(O. I. Aven, Ya. A. Kagan, et al.; AVTOMATIKA I TELEMEKHANIKA, No 1, Nov 86)..... 21

APPLICATIONS

Discussion of Artificial Intelligence Systems
(T. Gendzekhadze; MOLODEZH GRUZII, 16 Oct 86)..... 22

Intelligent Systems: Production and Market
(E. Popov, D. Pospelov; NTR: PROBLEMY I RESHENIYA, No 23, 2-25 Dec 86)..... 23

Database of Materials and Substances
(A. D. Kozlov; NTR: PROBLEMY I RESHENIYA, No 20, 21 Oct-3 Nov 86)..... 27

Engineer and Computer-Aided Design
(T. Tiydemann, L. Yusti; SOVETSKAYA ESTONIYA, 24 Dec 86)..... 30

Automation of Dairy Industry
(M. D. Baranov; ZEMLYA SIBIRISKAYA, DALNEVOSTOCHNAYA, No 9, Sep 86)..... 34

Automation of Accounting For Labor and Wages on Microcomputers
(Yu. V. Savelev; BUKHGALTERSKIY UCHET, No 4, Apr 86)..... 36

Accounting For Wages in Trade Using Computers
(V. I. Ivanov; BUKHGALTERSKIY UCHET, No 4, Apr 86)..... 36

Personal Computers For the Agricultural Industry
(A. Boyko; SOVETSKAYA KIRGIZIYA, 19 Sep 86)..... 38

THEORY OF COMPUTATIONS

Synthesis of One Class of Automatic Control System With Rigid Structure and Adaptive Properties. III. Synthesis of Automatic Control System Structures For Objects Containing Elements With Distributed Parameters
(L. D. Lozinskiy; AVTOMATIKA I TELEMEKHANIKA, No 1, Nov 86)..... 41

Flexible Algorithms For Design and Optimization of Programmed Movements of Manipulators
(A. V. Timofeyev, A. V. Shishlov; AVTOMATIKA I TELEMEKHANIKA, No 1, Nov 86)..... 42

Formation of Similarity Relationships in Systems Functioning by Analogy
(M. A. Zuyenkov, A. S. Kulguskin, et al.; AVTOMATIKA I TELEMEKHANIKA, No 1, Nov 86)..... 42

NETWORK

Implementation of A Local Terminal Network
(A. G. Atamanchuk, V. I. Benevelskiy, et al.; AVTOMETRIYA, No 4, Jul-Aug 86)..... 44

GENERAL

Organization of Accounting in Computer Centers
(V. I. Nazarchuk; BUKHGALTERSKIY UCHET, No 4, Apr 86)..... 45

JPRS-UCC-87-015

10 SEPTEMBER 1987

Soviet books and journal articles displaying a copyright notice are reproduced and sold by NTIS with permission of the copyright agency of the Soviet Union. Permission for further reproduction must be obtained from copyright owner.

SCIENCE & TECHNOLOGY

USSR: COMPUTERS

CONTENTS

HARDWARE

Creation of External Memory Fields for YeS Computer Systems
(D. I. Aleshin, T. V. Kuznetsova; OTECHESTVENNYY OPYT V OTRASLI 'SVYAZ.' SERIYA: EKONOMIKA, PLANIROVANIYA UPRAVLENIYA. EKSPRESS-INFORMATSIYA, No 3-4, 1987)..... 1

Assembly-Line Production of YeS-1840
(SOVETSKAYA BELORUSSIYA, 2 Apr 87)..... 5

Elbrus, Other Computer Projects Outlined
(A. P. Yershov; IZVESTIYA, 3 May 87)..... 6

Soviet PC Strategy Outlined
(A. Tertychnyy; RABOCHAYA GAZETA, 12 Sep 86)..... 10

New Soviet Supercomputer With Parallel-Processor Architecture
(I. Ivanov; NTR: PROBLEMY I RESHENIY, No 8, 21 Apr-4 May 87)..... 14

Pulsating Autosoliton and Driving Center in Two-Component Systems With Diffusion
(V. V. Osipov, I. I. Lazurchak, et al.; MIKROELEKTRONIKA, No 1, Jan-Feb 87)..... 16

BD-411 Branch Driver
(N. V. Gorunov, A. G. Karev, et al.; PRIBORY I TEKHNIKA EKSPERIMENTA, No 1, Jan 87)..... 16

Movement-to-Code Converter, Its Interface With Microprocessor System
(V. T. Malikov, I. Ya. Khaimzon, et al.; PRIBORY I TEKHNIKA EKSPERIMENTA, No 1, Jan 87)..... 17

Multiparameter Experimental Data Output Module
(V. A. Zayka, V. V. Naumov, et al.; PRIBORY I TEKHNIKA EKSPERIMENTA, No 1, Jan 87)..... 17

APPLICATIONS

Increase in Resolution of Spectrometric Tract by Processing Experimental Data on a Minicomputer
(V. A. Voronov, Yu. I. Nechayev, et al.; PRIBORY I TEKHNIKA EKSPERIMENTA, No 1, Jan 87)..... 18

Universal YeS Computer Driver Interfaces for Organization of Data Collection Using BIS-2 Filmless Spectrometer
(B. N. Guskov, D. A. Kirillov, et al.; PRIBORY I TEKHNIKA EKSPERIMENTA, No 1, Jan 87)..... 18

Lack of Computers in Agriculture
(D. Dimchoglo; SOVETSKAYA MOLDAVIYA, 24 Mar 87)..... 20

Classifiers and Documents: A Collection of Scientific and Technical Abstracts
(KLASSIFIKATORY I DOKUMENTY, No 3, Mar 87)..... 22

Organization of Technical Service Sections for Line Equipment Shops Using 'SVYAZ-I' Computer System
(V. S. Furdylova, P. V. Kondratyev; OTECHESTVENNYY OPYT V OTRASLI 'SVYAZ.' SERIYA: EKONOMIKA, PLANIROVANIYA UPRAVLENIYA. EKSPRESS-INFORMATSIYA, No 3-4, 1987)..... 42

Implementation Results and Prospects for Database Organization and Management Subsystem of 'Communications' Automated Plan Calculation System
(B. V. Yakovlev; OTECHESTVENNYY OPYT V OTRASLI 'SVYAZ.' SERIYA: EKONOMIKA, PLANIROVANIYA UPRAVLENIYA. EKSPRESS-INFORMATSIYA, No 1-2, 1987)..... 45

Application of SPEKTR Database Management System to Accounting Tasks
(I. A. Rumyantseva; OTECHESTVENNYY OPYT V OTRASLI 'SVYAZ.' SERIYA: EKONOMIKA, PLANIROVANIYA UPRAVLENIYA. EKSPRESS-INFORMATSIYA, No 3-4, 1987)..... 60

New Methods for Logic Monitoring of Data on Long Distance and International Telephone Service in Automated Subsystem for Real-Time Data Retrieval and Processing of Moscow Territorial Center for Management of Long Distance and International Communications
(S. M. Babich; OTECHESIVEUNYY OPYT V OTRASLI 'SVYAZ.' SERIYA: EKONOMIKA, PLANTROVANIYA UPRAVLENIYA. EKSPRESS-INFORMATSIYA, No 3-4, 1987)..... 66

Briefs

The Computer Helps Out 70

EDUCATION

Training on Personal Computers in the Ukraine
(RABOCHAYA GAZETA, 10 Apr 87)..... 71

A Class at the Computer Terminal... In a Railroad Car
(G. Giorgadze; MOLODEZH GRUZII, 27 Sep 86)..... 72

High School Computer Training
(EKONOMICHESKAYA GAZETA, No 19, May 87)..... 75

CONFERENCES AND EXHIBITS

First All-Union Conference on Physical and Physical-Chemical Properties of Microelectronics Announced
(MIKROELEKTRONIKA, No 1, Jan-Feb 87)..... 76

First Working Conference on Computer Optics
(A. S. Semenov; KVANTOVAYA ELEKTRONIKA, No 12, 1986)..... 77

Conference Discusses Software for Portability
(RABOCHAYA GAZETA, 12 Sep 86)..... 87

ORGANIZATIONS

Institute of Computer Mathematics, GSSR Academy of Sciences
(MOLODEZH GRUZII, 25 Sept 86)..... 89

JPRS-UCC-87-016

16 SEPTEMBER 1987

Soviet books and journal articles displaying a copyright notice are reproduced and sold by NTIS with permission of the copyright agency of the Soviet Union. Permission for further reproduction must be obtained from copyright owner.

SCIENCE & TECHNOLOGY

USSR: COMPUTERS

CONTENTS

GENERAL

Joint Soviet-Norwegian Computer Development
(VECHERNAYA MOSKVA, 27 Mar 87)..... 1

HARDWARE

SM-1700 Computers in Production
(V. Usinavichyusa; EKONOMICHESKAYA GAZETA, No 16, Apr 87)..... 2

'Lvov' Personal Computer in Production
(M. Kryslach; SOTSIALISTICHESKAYA INDUSTRIYA, 28 May 87)..... 3

New Interactive Computer Keyboard Announced
(RABOCHAYA GAZETA, 13 Mar 87)..... 4

Echo Processors; Signal Processing Aided by Nuclear and Spin Echo
(Vyacheslav Sergeyevich Barsukov; NOVOYE V ZHIZNI, NAUKE, TECHNIKE: SERIYA RADIOELEKTRONIKA I SVYAZ, No 2, 1987)..... 5

Coverage of Logic Circuits by Modules of Certain Series-Produced Systems
(G.P. Agibalov, A.M. Oranov; KIBERNETIKA, No 2, Feb 86). 8

Briefs

Soviet 'Fifth-Generation Computer' 9

SOFTWARE

Book on Software
(V.A. Vasilenko; NOVOYE TECHNIKE: SERIYA RADIOELEKTRONIKA,I SVYAZ (PROGRAMMNOYE OBESPECHNIYE EVM), No 3, 86)..... 10

Subroutine Systems and Facilities for Interacting With Them
(A.N. Biryukov, I.M. Mikhaylik; DOKLADY AKADEMII NAUK SSSR, No 3, Mar 87)..... 12

The RANETS-1 Application Software for Approximate Solution of the Generalized Knapsack Problems
(A.A. Aliyev, F.B. Akhmedov, et al.; KIBERNETIKA, No 2, Feb 86)..... 13

THEORY OF COMPUTATION

Method of Localizing the Area of the Optimum in Mathematical Programming Problems
(A.F. Voloshin; DOKLADY AKADEMII NAUK SSSR, No 3, Mar 87)..... 14

The Maximum Principle for Control Systems Described by Differential Equations in Distributions
(Yu.V. Orlov; DOKLADY AKADEMII NAUK SSSR, No 3, 1986)... 14

Effective Algorithm for Deterministic Problem of Scheduling Theory With Parallel Devices
(Ya.A. Zinder; KIBERNETIKA, No 2, Feb 86)..... 15

Pulse-Point Control of Pseudoparabolic System
(S.I. Lyashko; KIBERNETIKA, No 2, Feb 86)..... 15

Algorithm of Singular Expansion for Multiprocessor Computers With Parallel Computation
(Kh.D. Ikramov, I.N. Molchanov; KIBERNETIKA, No 2, Feb 86)..... 16

Properties of Differentiable Multivalued Mappings
(V.G. Bondarevskiy, L.I. Minchenko; KIBERNETIKA, No 2, Feb 86)..... 16

Computation of Marginal Function Subdifferentials
(L.I. Minchenko; KIBERNETIKA, No 2, Feb 86)..... 17

Convergence of Method of Chebyshev Centers and Some of Its Applications
(E.I. Nenakhov, M.Ye. Primak; KIBERNETIKA, No 2, Feb 86)..... 17

Finite Method of Minimizing Concave Function With Linear Limitations and Its Applications
(Chan Vu Tkhyeu; KIBERNETIKA, No 2, Feb 86)..... 18

Problem of Minimal Blocking Flow in a Network
(V.V. Malyshko, F. Kharari; KIBERNETIKA, No 2, Feb 86).. 18

Numerical Solution of Differential Parabolic Second Order Equations on Computers With Parallel Organization of Computation
(I.N. Molchanov, V.N. Brusnikin; KIBERNETIKA, No 2, Feb 86)..... 19

Optimization Approach to Control of Systems With Undefined Dynamics
(S.V. Yemelyanov, S.V. Nikitin, et al.; DOKLADY AKADEMII NAUK SSSR, No 5, 1986)..... 19

Analytic Calculation of Multivariate System Transfer Function Coefficients
(S.F. Babak, B.G. Ilyasov, et al.; DOKLADY AKADEMII NAUK SSSR, No 3, 1986)..... 20

APPLICATIONS

Artificial Intelligence: New Stage of Development
(D.A. Pospelov; VESTNIK AKADEMII NAUK SSSR, No 4, Apr 87)..... 21

Constructing Models in Organizing Management Process
(G.S. Goldenberg, L.M. Khodorkovskiy; MEKHANIZATSIYA I AVTOMATIZATSIYA PROIZVODSTVA, No 12, Dec 86)..... 30

Organization of Information Base Under Conditions of Development and Integration of Automated Management Systems
(B.G. Klimov, V.I. Chirkov; MEKHANIZATSIYA I AVTOMATIZATSIYA PROIZVODSTVA, No 12, Dec 86)..... 38

Automation of Modeling of Part Machining Processes
(L.A. Kopelevich, Ya.Z. Rolbin; MEKHANIZATSIYA I AVTOMATIZATSIYA PROIZVODSTVA, No 12, Dec 86)..... 46

Automation of Health Center Activities
(Valentina Nechayeva; ZARYA VOSTOKA, 1 Feb 87)..... 52

Development of Automated Accounting System for Railways
(M. Keler; MOSKOVSKAYA PRAVDA, 8 Apr 87)..... 54

Computer-Aided Design System Used in Norm Setting
(L. Bakhtina; MOSKOVSKAYA PRAVDA, 25 Apr 87)..... 56

Review of Book on Planning of Production Under Automated Systems Management
(V.I. Danilin; EKONOMIKA I MATEMATICHESKIYE METODY, No 4, Jul-Aug 86)..... 57

Movement of Fluid in Channels of Small Cross Section, Accompanied by Heat Transfer and Sedimentation
(V.M. Yentov, K.P. Ivanov, et al.; DOKLADY AKADEMII NAUK SSSR, No 3, 1986)..... 60

NETWORKS

Development of Automatic Telegraph Processing System
(F. Danilovskiy; MOSKOVSKAYA PRAVDA, 3 Feb 87)..... 61

Problems in Automation of Telegraph Communications
(F. Danilovskiy; MOSKOVSKAYA PRAVDA, 5 Mar 87)..... 63

EDUCATION

Children's Computer Club Started in Moscow
(S. Khozin; NTR: PROBLEMY I RESHENIY, No 12, 17 Jun-7 Jul 86)..... 66

PUBLICATIONS

Modern Computers: Equipment and Practical Use
(NOVOYE V ZHIZNI, NAUKE, TEKNIKE: SERIYA TEKHNIKA (SOVREMENNYYE KOMPUTERY: USTROYSTVO I PRAKTIKA ISPOLZOVANIYA), No 3, 86)..... 67

CONFERENCES AND EXHIBITS

Tenth All-Union Conference on Problems of Management
(A.A. Ashimov, B.A. Dzhaparov; VESTNIK AKADEMII NAUK KAZAKSKOY SSR, No 1, Jan 87)..... 68

/9835

JPRS-UCC-87-017

23 SEPTEMBER 1987

Soviet books and journal articles displaying a copyright notice are reproduced and sold by NTIS with permission of the copyright agency of the Soviet Union. Permission for further reproduction must be obtained from copyright owner.

SCIENCE & TECHNOLOGY

USSR: COMPUTERS

CONTENTS

GENERAL

Physicist Challenges Pretentions of Computer Omnipotence
(I. Radkevich; LITERATURNAYA GAZETA, 17 Sep 86)..... 1

HARDWARE

The Voltmeter
(N. Bondar; SOVIETSKAYA ESTONIYA, 1 Oct 86)..... 8

APPLICATIONS

Improving Database Organization and Management of Scientific and Technical Preparation of Sector Output Based on Unified System of Notation of Products and Design Document Notation, Regulated by GOST 2.201-80
(Yu.A. Miroshnichenko; STANDARTY I KACHESTVO, No 3, Mar 87)..... 11

Experience of Classification and Coding of Design Documents
(B.M. Aksenov; STANDARTY I KACHESTVO, No 3, Mar 87)..... 20

On Classifier for Special Production Retooling
(A.L. Sinitsyna, M.Z. Usova; STANDARTY I KACHESTVO, No 3, Mar 87)..... 26

Computer-Aided Scientific Research Systems
(Nikolay Vladimirovich Sinitsyn, Vladimir Petrovich Petropavlovskiy, et al.; NOVOYE V ZHIZNI, NAUKE, TEKHNIKE: SERIYA RADIOELEKTRONIKA I SVYAZ, No, 1987)... 32

EDUCATION

New Microprocessor Engineering Lab Opens in Tallinn
(A. Sayankin; SOVETSKAYA ESTONIYA, 24 Sep 86)..... 81

/9835

JPRS-UCC-87-018

28 SEPTEMBER 1987

Soviet books and journal articles displaying a copyright notice are reproduced and sold by NTIS with permission of the copyright agency of the Soviet Union. Permission for further reproduction must be obtained from copyright owner.

SCIENCE & TECHNOLOGY

USSR: COMPUTERS

CONTENTS

GENERAL

Machine Engineering in Computer Age Discussed
(K.V. Frolov, V. I. Babitskiy; IZOBRETATEL I RATSIONALIZATOR, No 12, 1986)..... 1

Black Market for Computer Games Software
(S. Kozyrev, S. Sokolov; KOMSOMOLSKAYA PRAVDA, 13 Mar 87).... 8

HARDWARE

Work at the Elektronmash Plant
(V. Nazarchuk; RABOCHAYA GAZETA, 12 Feb 87)..... 12

Serial Production of TVK-1
(SOVETSKAYA LITVA, 25 Feb 87)..... 18

APPLICATIONS

Computer Graphics and Scientific Research Automation
(V.L. Perchuk; PRIRODA, No 2, Feb 87)..... 19

Electronic Information and Ticket System at Central Railroad Bureau
(A. Artemev; VECHERNYAYA MOSKVA, 9 Feb 87)..... 32

Computers in GDR Agricultural Sector
(R. Meyer; SELSKAYA ZHIZH, 30 Jan 87)..... 34

The Second Year of the Five-Year Plan
(STANDARTY I KACHESTVO, No 1, Jan 87)..... 36

Improvements of Interindustry Sets of Standards: A Major Challenge for Standardization
(M.A. Dovbenko; STANDARTY I KACHESTVO, No 1, Jan 87)..... 40

The Pluses and Minuses of the New System of Codes
(Yu.P. Shevel, Yu.P.Lyubushkina; STANDARTY I KACHESTVO, No 1, Jan 87)..... 47

Automation of a System of Government Testing
(V.I. Shevchenko; STANDARTY I KACHESTVO, No 1, Jan 87)..... 57

Book: Information and Design
(NOVOYE V ZHIZNE, BAUKE, TEKHNIKE, SERIYA MATEMATIKA, KIBERNETIKA, No 10, 1986)..... 62

Dialogue Procedure for Formation of Ordinal Measurement Scale
(T.F. Kikvadze; SOOBSHCHENIYA AKADEMII NAUK GRUZINSKOY, No 1, 1986)..... 64

NETWORKS

Determining Defects and Functional Incompatibility of Components of an Information Network Element
(Kh. V. Lekiashvili; SOOBSHCHENIYA AKADEMII NAUK GRUZINSKOY SSR, No 2, 1986)..... 65

A Dialogue Across Continents
(EKONOMICHESKAYA GAZETA, No 13, Mar 87)..... 66

THEORY OF COMPUTATIONS

Recurrent Identification of Nonlinear Objects of Hammerstein Class
(F.F. Pashenko, G.R. Bolkvadze, et al.; SOOBSHCHENIYA ACADEMII NAUK GRUZINSKOY SSR, No 1, 1986)..... 69

One Algorithm for Search for a Global Extreme
(A.I. Kuznetsov; SOOBSHCHENIYA AKADEMII NAUK GRUZINSKOY SSR, No 2, 1986)..... 69

Existence of the Uniform Subdivision in Classification Models
(M. Saidov; DOKLADY AKADEMII NAUK TADZHIKSKOY SSR, No 4, 1986)..... 70

Decomposition Controllability of a Robotic System
(O.K. Khanmamedov; AKADEMIYA NAUK AZERBAYDZHANSKOY SSR, No 12, 1986)..... 70

Modeling of Periodically Changing Biological Populations
(A. Makhmudov; IZVESTIYA AKADEMII NAUK UzSSR. SERIYA TEKHNICHESKIIKH NAUK, No 5, 1986)..... 71

EDUCATION

Computer Training for Students
(A. Presnyakov; VECHERNYAYA MOSKVA, 12 Feb 87)..... 72

Discussion of Magnetic Tape Production Problems
(S. Vonsovskiy; LITERATURNAYA GAZETA, 11 Feb 87)..... 73

JPRS-UCC-87-019

29 SEPTEMBER 1987

Soviet books and journal articles displaying a copyright notice are reproduced and sold by NTIS with permission of the copyright agency of the Soviet Union. Permission for further reproduction must be obtained from copyright owner.

SCIENCE & TECHNOLOGY

USSR: COMPUTERS

CONTENTS

GENERAL

Regarding the Payment for Services of Computer Centers
(A. Ivantsov; VESTNIK STATISTIKI, No 3, Mar 87) 1

Pay Microcomputer Centers Open With Agats, Mikroshas
(N. Slavutskaya; MOSKOVSKAYA PRAVDA, 9 Dec 86) 4

Book: Automatization of the Processes of Industrial Supply and Marketing by Japanese Firms
(Aleksandr Apollonovich Bashev, Andrey Nikolayevich Rodnikov; MATERIALNO-TEKHNICHESKOYE SNABZHENIYE: SERIYA 3: PRIMENENIYE MATEMATICHESKIKH METODOY, VYCHISLITELNOY TEKHNIKI I ORGTEKHNIKI V MATERIALNO-TEKHNICHESKOM SNABZHENII, No 1, 1987) 6

HARDWARE

Computer System Takes in Oral Speech
(TASS, 21 Feb 87) 9

Standardized Automata. I.
(Yu.V. Kapitonova, A.T. Mishchenko; KIBERNETIKA, No 5, Sep-Oct 86) 10

SOFTWARE

The SOL/YeS Translating System, Oriented Toward Modeling of Complex Systems
(G.A. Magariu, M.N. Marichuk, et al.; IZVESTIYA AKADEMII NAUK MOLDAVSKOY SSR. SERIYA FIZIKO-TEKHNICHESKIKH NAUK, No 3, 1986) 11

Influence of Distribution of Time of Restoration of Protection on Reliability of Protected Systems
(L.S. Stoykova, O.A. Yushchenko; KIBERNETIKA, No 5, Sep-Oct 86) 11

Decision Making Based on Analysis of a Decision Tree With Incomplete Information
(G.Kh. Babich; KIBERNETIKA, No 5, Sep-Oct 86) 12

Algorithm for Solving the Problem of Optimizing Reliability of a Complex System Using Dissimilar Redundant Elements in Subsystems
(V.L. Volkovich, V.A. Zaslavskiy; KIBERNETIKA, No 5, Sep-Oct 86) 12

Regularization of the Problem of Recognition of Objects and Phenomena
(A.L. Gorelik; KIBERNETIKA, No 5, Sep-Oct 86) 13

Algebraic Interpretation of R-Graphs
(V.Yu. Kayurov; KIBERNETIKA, No 5, Sep-Oct 86) 13

Universal Computer-Aided Design System
(TASS, 12 Mar 87) 14

APPLICATIONS

Methods of Determining Orientation of Objects in Robot Vision Systems
(S.A. Kuzmin; IZMERENIYA, KONTROL, AVTOMATIZATSIYA, No 2, 1986) 15

Production Implementation of Industry Branch Information Retrieval System
(A.I. Shkolnik, L.L. Shumlyanskaya; MEKHANIZATSIYA I AVTOMATIZATSIYA PROIZVODSTVA, No 1, Jan 87) 16

Classification Systems and Documents
(KLASSIFIKATORY I DOKUMENTY, No 2, Feb 87) 25

Growth of Turkmenistan's Information Industry Highlighted
(Kh. Nyyazov; SOVET TURKMENISTANY, 22 Nov 86) 51

NETWORKS

Estafeta Local Area Network Shown on TV
(STV-2, 1530 GMT, 12 Jan 87) 52

THEORY OF COMPUTATIONS

Optimization of Descriptor Information Retrieval Systems
(A.M. Ivani, A.N. Sotnikov; VESTNIK MOSKOVSKOGO UNIVERSITETA. SERIYA: VYCHISLITELNAYA MATEMATIKA I KIBERNETIKA, No 1, 1987) 53

One Method of Constructing an LR(1) Analyzer
(V.V. Ignatov; VESTNIK MOSKOVSKOGO UNIVERSITETA. SERIYA: VYCHISLITELNAYA MATEMATIKA I KIBERNETIKA, No 1, 1987) 53

Use of Proof Computations on Computers To Study Properties of Linear Mappings in Finite-Dimensional Spaces
(P.I. Balk; KIBERNETIKA, No 5, Sep-Oct 86) 54

Qualitative Study of Trajectory Problems
(V.K. Leontev, E.N. Gordeyev; KIBERNETIKA, No 5, Sep-Oct 86) 54

First Direct Method of L.S. Pontryagin and Some Effective Pursuit Methods
(A.A. Chikriy, M.V. Pittsyk, et al.; KIBERNETIKA, No 5, Sep-Oct 86) 55

Controllability in Multivalued Discrete Processes
(Vu Ngok Fat; KIBERNETIKA, No 5, Sep-Oct 86) 55

Formal Technology and Universal Systems. II.
(S.M. Krylov; KIBERNETIKA, No 5, Sep-Oct 86) 56

PUBLICATIONS

Mathematical Modeling: Processes in Complex Economic and Ecological Systems
(A.A. Samarskiy, N.N. Moiseyev, et al.; MATEMATICHESKOYE MODELIROVANIYE: PROTSESSY V SLOZHNYKH EKONOMICHESKIKH I EKOLOGICHESKIKH SISTEMAKH, 1986) 57

CONFERENCES, EXHIBITS

Conference: Use of Microprocessors for ASU TP
(R. Gevorkyan; KOMMUNIST, 25 Nov 86) 67

Standardization and Quality Management in Various Regions of the Country
(Ye.T. Larina; MEKHANIZATSIYA I AVTOMATIZATSIYA PROIZVODSTVA, No 1, Jan 87) 69

EDUCATION

The Computer Has Come to School
(RUSSKIY YAZYK I LITERATURA V KAZAKHSKOY SHKOLE, No 7, Jul 86) 76

Robotron-1720 in Training Center
(KOMMUNIST, 1 Nov 86) 81

/13046

END

END OF FICHE DATE FILMED

15 Aug. 1988